PRINTING EQUIPMENT *Engineer*

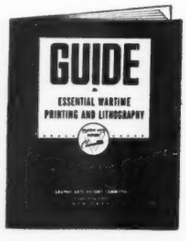
A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

SEPTEMBER 1943

Faith Today

Who brought the first printing plant into Fort Dodge—or into any other booming frontier town—who gambled his last dollar upon his faith in *printing* as a vitalizing force? It was a *printer*, an idealist, a man of vision. He believed that education would make America the ideal for the world, would protect liberty and stimulate prosperity. He staked his all upon his dream. His shop in the woods or on the prairies became a clearing house of ideas, the mainspring of growth.

The printer's faith in himself, his profession, and his country, triumphed over gruelling hardships in pioneer days. Today, America's Graphic Arts, competent, well-drilled, and endowed with the old printing spirit of fighting faith, is qualified to master even the tougher tasks arising from war needs, and later to cope with the constructive needs of a Nation at peace.



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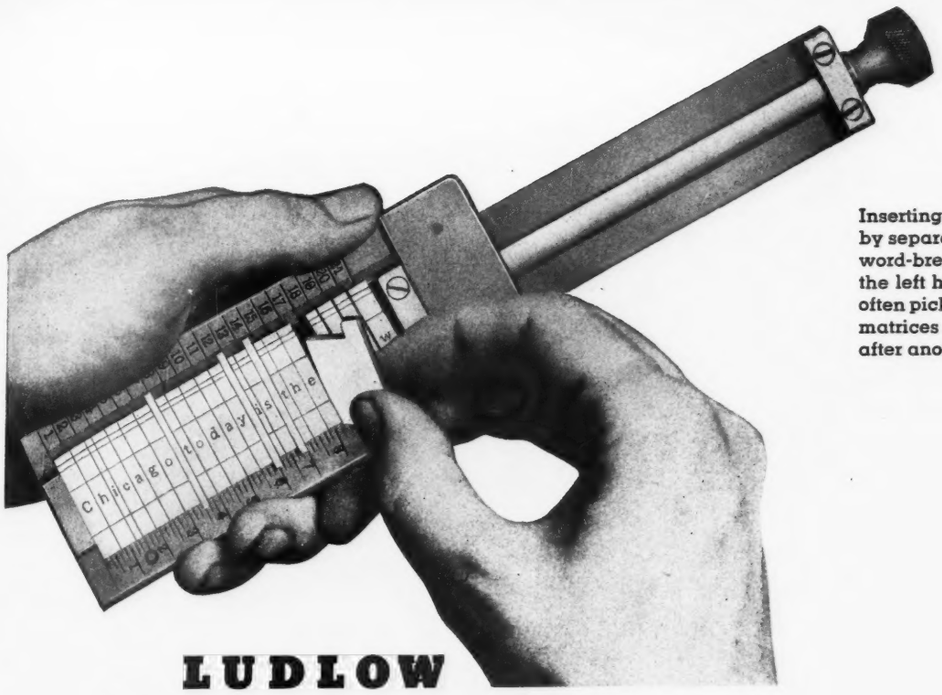

Inserting a space matrix simply by separating letter matrices at word-breaks with the thumb of the left hand. Ludlow operators often pick up a handful of space matrices and "feed" them one after another into the line.

LUDLOW

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One of the reasons why Ludlows are hanging up such excellent records in the production of wartime printing is the simplicity and ease of spacing the Ludlow way.

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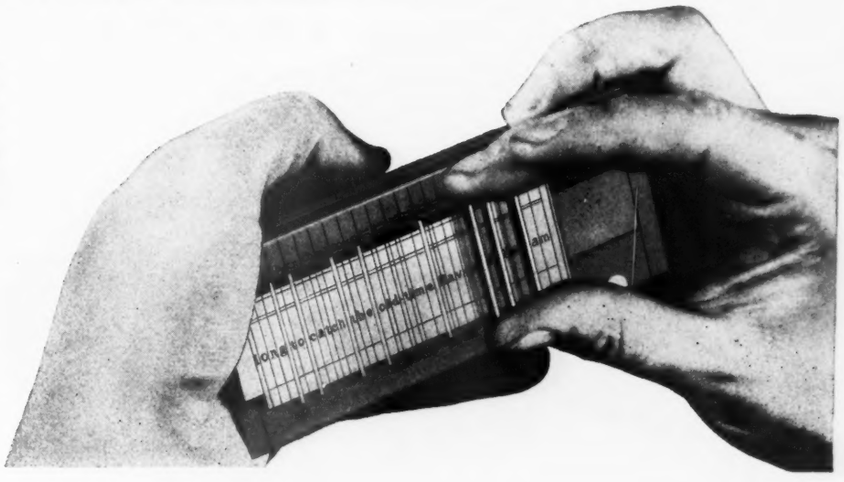
And ease of spacing is only one of the many reasons why Ludlow hand-set, slug-cast composition is favored for the composition of wartime printing jobs.

Ludlow Typograph Company 2032 Clybourn Avenue, Chicago 14, Illinois

Removing space matrices a number at a time by their "ears" which protrude beyond the ears of the letter matrices. A simple movement of the hand stacks them all in the same position in the Ludlow space case where they are again ready for instant use.



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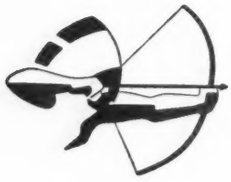
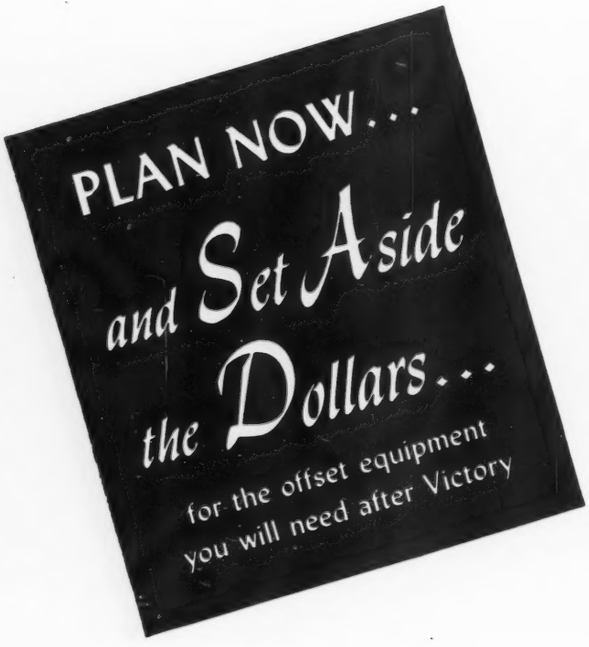
What will you do when the war is won?



PEACE won't settle down softly. It will drop on us like a depth-bomb. Hundreds of advertising campaigns... now being kept "on ice" because of the war effort... will spring into action at once. Booklets, broadsides, folders, leaflets, letters, office forms will be poured out in a veritable flood, in the scramble by business to regain and build up its commercial markets. Only the completely equipped printing plant will be able to meet the demand.

As it is doing today... offset lithography after the war will account for a large share of the post-war printing business. The important question is whether or not it will be done *by you.*



The time has come for every letterpress printer to make offset his friend. The well-balanced shop of the future must have *both.* Each supplements the other. And no one better than you has the knowledge of paper, inks, typography, and four-color process to set the high standard for offset lithography you already have set for letterpress.

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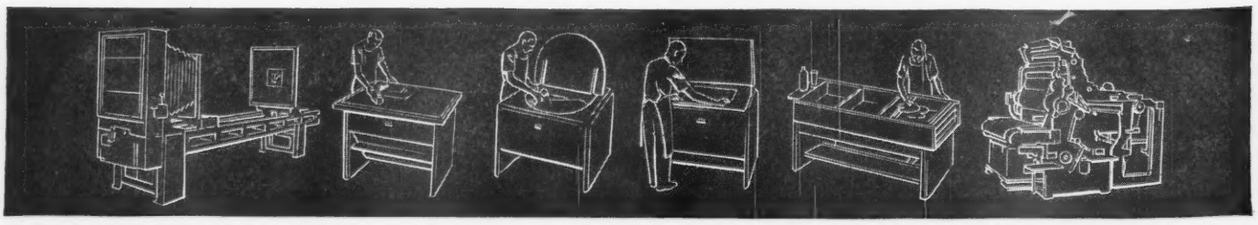

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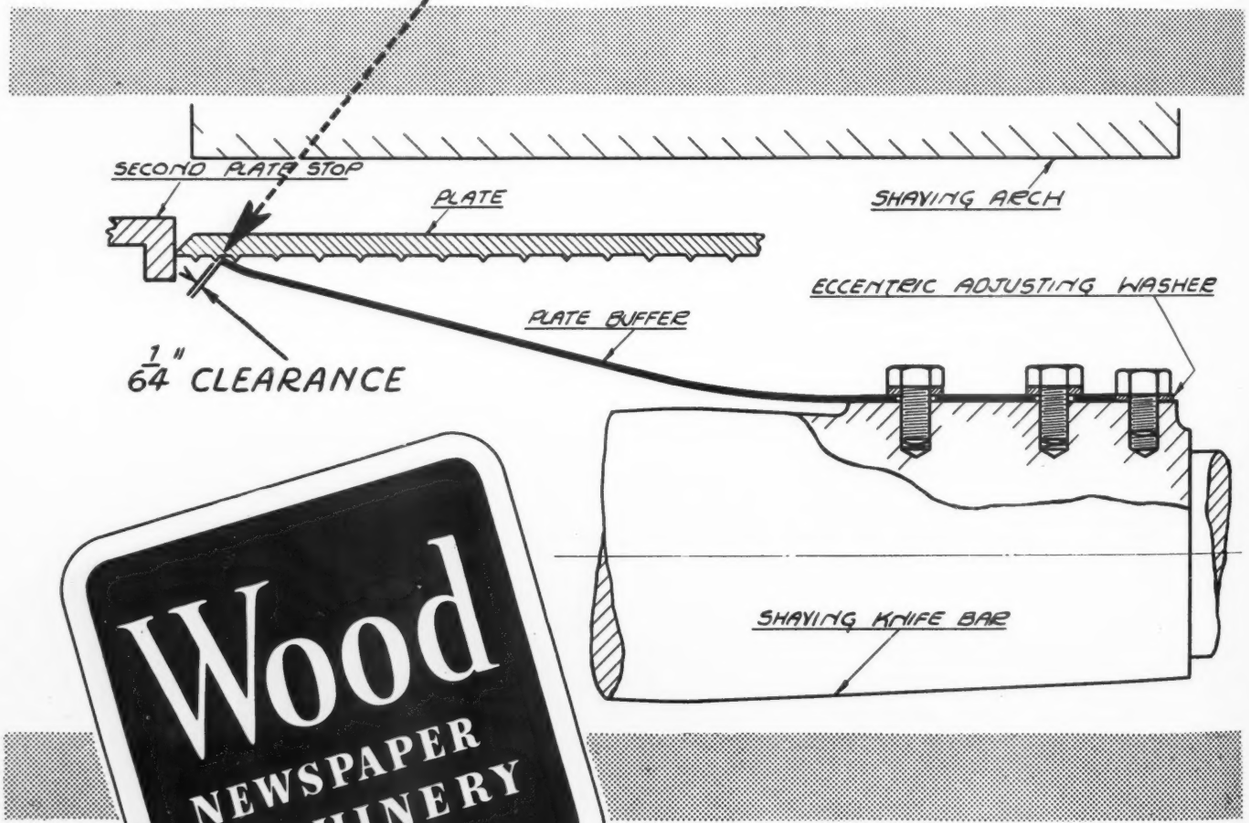

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LEADING ARTICLES, SEPTEMBER 1943

Highlights Memphis Craftsmen's Convention 9

Tabular Composition on Line-Composing Machine from 2 pt. unit matrices, quadder, vernier and key-slug holder 9
Geo. Y. Martin

Craftsmen's Convention Report
Group action on conservation. Many technical subjects discussed 11

Photo-Plastic Non-metallic Halftone Process to be ready for market shortly 14

Plastic-mold and Iron Plating Processes Used in Magazine Production 15
Mannie G. Hubbell

Equipment and Supplies 20

New England Newspaper Mechanical Conference is To Be Serious Affair 24

Foreman Joe Bloe has hectic day at the plant —Makes progress with Note Book. By *William Wyatt Warfel* 25

Patent Report 33

WPB News and Notes 38

PRINTING EQUIPMENT *Engineer*, a monthly publication, Volume 66, No. 6. Published at 1276 West Third St., Cleveland 13, Ohio, September, 1943.— MacD Sinclair, Editor. Adam Henri Reiser, Associate Editor. J. Homer Winkler, Contributing Editor. — Don Will, Publisher. Western Representative E. P. Bloomster, 232 East Erie St., Chicago, Ill., phone SUperior 2444.

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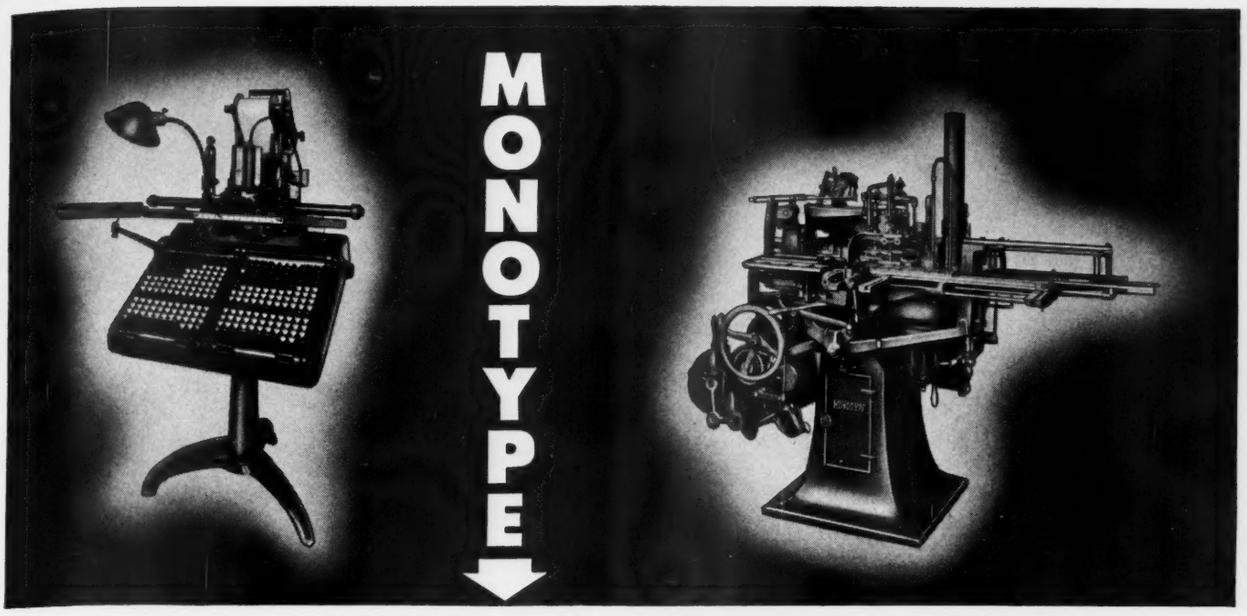

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It is futile to suggest that any typesetting machine can produce composition with one operation, for the two distinct functions of keyboarding and casting must be carried on in any hot-metal machine. It is apparent that where an attempt is made to combine these two functions in one device one function must constantly impose a limitation on the other—where keyboarding could be faster it is limited to casting capacity, where it is slower the casting function must wait for it.

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WHAT is your mental picture of the post-war world in view of recent scientific and industrial advances, global improvement in communication and transportation, and greater friendship among nations? Do you envision an amazing new world in the making? As a representative of the Graphic Arts are you thinking of the betterments which will be required in the printing world to keep pace with the industrial and commercial advance?

We of the Levey organization have many definite projects "simmering" which we believe will aid in the evolution of printing once the clouds of war have passed—and to that end we are working with printers, publishers and packaging producers to be ready for the glorious peace and post-war problems.

Throughout our capable Research, Engineering and Production Departments, we are cooperating with dozens of customers in adapting present equipment to produce better printing and greater production. We have created new resins, vehicles and colors to meet demands for more production without sacrificing printing quality. In most cases this has been done with no increase in printing cost.

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Some Highlights Contained in Report of Memphis Craftsmen's Convention—See Page 11

1—Messrs. Link, Schneider and Wolff of WPB, urge Craftsmen to project voluntary group action to aid war.

2—Convention unanimously urges local Craftsmen's Clubs to devote September or October meetings to ways and means for voluntary conservation of paper and copper.

3—Deviny keynotes qualities of successful printing executive.

4—Training of women in industry difficult because of long apprenticeship required and higher initial wage paid by war industries.

5—More than ever, type must now tell its own story.

6—Developments in use of plastics for type and plates discussed. Largely in experimental stage as yet.

7—Photo-composing machines being used in limited way by letterpress.

8—Executives advised to study electronics as applied to industry.

9—Non-metallic plastic base halftone process described. Thought to be useful alternative material for critical copper.

10—Water-base ink for two-side soft-paper rotary printing successful, but further development held in abeyance until close of war.

11—President A. J. Math of National Association of Printing Ink Makers, presents encouraging report to Craftsmen.

12—"Chromatic" printing technique described by John L. Wybest

13—Simoniz Wax used on press and bindery equipment to reduce static.

14—New plastic mold electrotype process developed by Printing Plates Research, Inc., discussed by Mannie Hubbell.

15—Developments in commercial stereotyping process technique described by Henry Messina. Molding pressures now compare favorably with those used in other plate-making processes. Fine-screen reproduction in every-day production use.

16—Flush-mounted thin-gauge copper halftones with plastic adhesive on wood base reported by Gradie Oakes.

17—Fast moving Job Planning and Production Control Clinic supervised by two Craftsmen plant executives provides concrete ideas in plant supervision.

18—Offset-lith Clinic produces conservation ideas.

19—Wm. C. Huebner tells about after-war technical developments. Printing without pressure on lighter-weight presses, simultaneous color separations, and photo-typesetting all have been developed for practical use, he reports.

TABULAR COMPOSITION *facilitated on line-composing machine by means of vernier and key-slug holder in Oregon plant — Machine equipped with 2 pt. unit matrices, and quadder — Spacebands not used*

By GEO. Y. MARTIN*

*Superintendent, The College Press, Oregon State College, Corvallis, Ore.

DURING the past three years we have developed, and in part perfected, what we believe to be a unique method of composing intricate and multiple justification tabular matter on a slug-casting machine. The results have been gratifying. In case others may be interested in how these results were accomplished, I shall endeavor to describe briefly our experience and the developments that have been made.

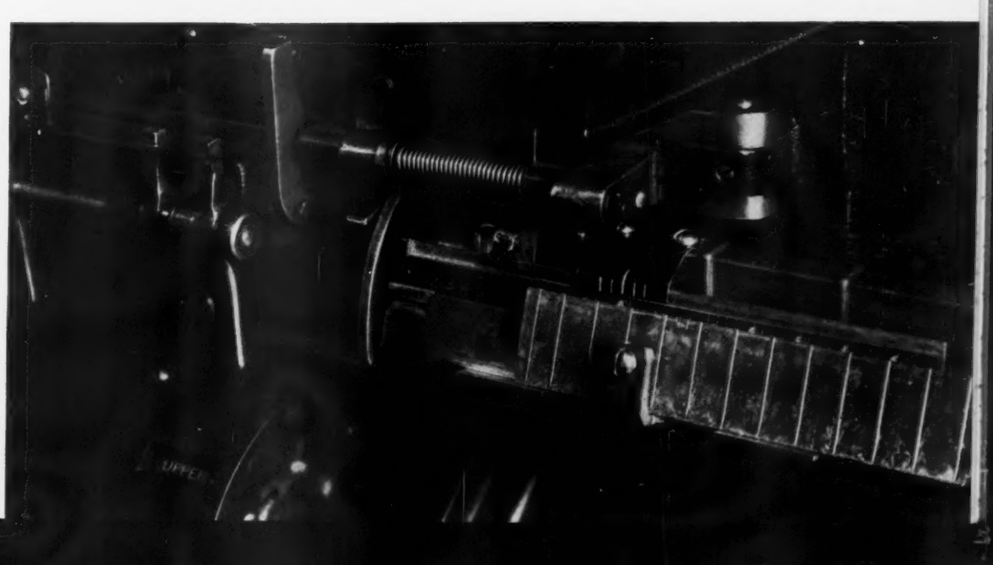
The installation of a composing machine equipped with a quadder attachment made possible the casting of lines without the use of spacebands. This improvement caused us to believe that unusual results were possible in the range of difficult tabular composition if we could obtain a precision font of mats with a minimum number of character widths. By eliminating spacebands and substituting constant space, such as thin spaces and en spaces, many complicated justifications could be made on a single slug provided the number of character widths was minimized.

Matrix face 6 pt. No. 17 with condensed title No. 5 was selected as best suited to our requirements. This font is punched on a 2 pt. unit basis having a range in matrix thickness from 2 to 8 pts. and is confined to four variations—2, 4, 6 and 8 pts. In other words, each character in the entire font is punched on one of four matrix widths. We immediately found that the combined use of this font with the quadder held definite possibilities. Up to this point, however, there was nothing unusual about our discovery. Probably many other plants have used a similar combination. But we didn't stop at this point.

Our problem concerned itself with overcoming the difficulties of highly intricate composition—not ordinary figure columns—but composition that embodied figures, special characters and a

View of slug holder and vernier scale attached to Intertype line-composing machine in plant of the College Press, Oregon State College, Corvallis, Ore. In the accompanying article, Supt. Geo. Y. Martin explains the use of this device in setting multiple justification tabular matter. After the table has been cast up by the operator, a key slug containing the proper justifications, is placed in the holder and is held rigidly in position by the screw as shown in this illustration.

The key slug is offset in relation to the assembler slide scale to compensate for the distance between the vernier and the right-hand end of the scale when the assembler slide is in normal position. In other words, when the assembler is set for full 30-pica measure, there is 1 3/16 in. space between the center line on the vernier scale and the right-hand end of the assembler scale which necessitates moving the slug to the right. With the slug in position, the graduations on the assembler scale which show just above the slug, serve no definite purpose. The graduations on the vernier, however, are the guides to alignment and are 8 pts. apart. The face of the vernier is 7/8 in. wide. This 8 pt. measurement represents the extreme width of the widest character in the 6 pt. tabular font with which this device is used. In this illustration, approx. 18 picas of a 25 pica line has been composed in the assembling elevator. The center line on the vernier scale is in exact alignment with the last vertical rule (or justification) on the slug.



C. A. A. CIVILIAN PILOT TRAINING

Subject	Course	Term F	Term W	Term S	Hrs.	Prerequisites	Sect.	Lect.	Rec.	Lab.	Time	Instructor
Primary Civilian Pilot Training	CA	241	241		6						To arrange	Zilka
Advanced Civilian Pilot Training	CA	341		341	12						To arrange	Zilka

MINING ENGINEERING

METALLURGY

Fire Assaying (g)	Met	471	472		2	Ch 233				M 104	MF 1-2-3	Meade
Ore Dressing (g)	Met	481	482		3	G 201, 202, 203		M 202			MWF 8	Meade
	Met			483	3	Met 482, Ch 233, 340		M 202			MWF 8	Meade

MINING ENGINEERING

Mining Methods (g)	MiE	441		443	4	GE 111, 112, 113		M 202			TuThS 8	Meade
Mining Engineering (g)	MiE		442	443	3	MiE 441		M 202			TuThS 8	Meade
Mine Surveying (g)	MiE			453	3	CE 221, GE 111, 112, 113		M 202		M 202	M 1, TuF 1-2-3	Meade

INDUSTRIAL ARTS

Pattern Making	IA	111			3		IA	IA 105			M 1	Meyer
							Fr			IA 104	M 2-3-4, W 3-4-5	Robley
							So			IA 104	TuTh 9-10-11	Meyer
Methods in Woodworking	IA		112		3	IA 111	IA Fr	IA 105		IA 104	M 1, M 2-3-4, W 3-4-5	Meyer
	IA		112		3	IA 111	IA Fr	IA 105		IA 104	M 1, TuF 1-2-3	Meyer
	IA			113	3	IA 111	IA Fr	IA 105		IA 104	M 1, MW 2-3-4	Meyer

Table 2. Directions for Preparing and Dehydrating Vegetables*

Product	Stage of maturity	Preparation	Treatment before dehydration: Method	Treatment before dehydration: Time	Spread per square foot of tray surface	Approximate yield from 100 pounds of fresh material: Prepared	Approximate yield from 100 pounds of fresh material: Dehydrated	Dehydration temperature	Approximate drying time	Dehydrated product: Condition when dry	Dehydrated product: Keeping quality
				Minutes	*Pounds*	*Pounds*	*Pounds*		*Hours*		
Asparagus	Tender tips; stalks soft not woody	Wash, trim, cut into 1½" lengths; split large pieces	Steam blanch	4	¾	65–75	6–8	150°–155°	7–9	Brittle Greenish–black	Good
Beans (green)	Mature, tender, not stringy	Snip, cut into 1-inch lengths	Steam blanch	10–12	¾	90	9–12	150°–155°	8–12	Brittle Greenish–black	Good
Beans (Lima)	Tender, immature	Shell, wash	Steam or boiling water	5–6	¾	30–35	15–18	150°–155°	8–10	Hard Wrinkled	Good

Reproduced by photo-engraving in somewhat smaller size, are sections of two tables set on a line-composing machine in the College Press at Oregon State College, Corvallis, Ore., through a method devised by Operator-Machinist Andrew Thomas, and described in the accompanying article by Superintendent Geo. Y. Martin. These tables were composed on a machine equipped with a quadder. No spacebands were used in the composition. The matrix font is punched on a 2 pt. unit basis having a range of matrix thickness from 2 pts. to 8 pts., the thicknesses consisting of 2, 4, 6 and 8 pts. each according to character thickness setwise.

When words of various lengths fall into a table column of figures the alignment of figures in the remaining columns becomes difficult. Now, with the quadder equipment on the machine and the 2 pt. unit basis of matrix thickness in the font, Mr. Thomas devised an attachment which permits the operator to calculate the proper width of each column (irrespective of words or figures, or both) as he goes along in order to obtain proper justification.

A key slug, containing the proper cast-up of the table, is positioned in a holder directly in front of and slightly below the assembler slide scale. The vernier piece is attached to the assembler slide and moves to the left as the line is assembled, passing over the face of the key slug. The vernier shows at a glance when alignment of each justification is attained.

Two examples of tabular composition are shown here. In the upper table, the composition consists of two slugs, 23 and 25 picas respectively. The first slug contains 7 justifications and the second slug contains 6 justifications. Incidentally, the regular vertical rule matrix is used for the vertical lines extending from top to bottom of the table. The section in the upper table is reproduced from a table measuring 48 picas wide by 30 picas deep. There were 72 pages of such composition in the Class Schedule Booklet published by the College.

Mr. Martin states that total machine composition time on this job averaged slightly less than 1 hr. per page, which is a saving of approx. 30% in composition time.

In the lower part of this illustration, is shown a section of a dehydration table set similarly to the upper example shown here. This table, likewise, was set on two slugs with numerous justifications on each. The box headings, however, were cut in. Machine matrices were not used in composing this table for the vertical rules between columns—a tabular rule being broached in for the vertical lines.

variety of words in the same column. Most any operator can set figure columns and determine the number of quads or spaces he must substitute for any number of digits that may be omitted from one or more columns, but when words of various lengths fall into a column of figures the alignment of figures in the remaining columns becomes increasingly difficult and tedious. In fact, without the aid of some form of indicator, alignment of columns or vertical rules under such conditions is almost impossible despite the advantages that a precision matrix font and quadder afford.

Andrew Thomas, our operator-machinist, began experimenting with a gadget he had fashioned out of a couple of pieces of brass rule. After making some refinements the device was attached to the machine. It consists of a slug holder and a simple contraption involving the vernier principle. The slug holder is positioned on the machine so as to hold the key slug directly in front of and slightly below the assembler slide scale. The vernier is attached to the assembler slide and moves to the left as the line is assembled. As this movement takes place the vernier passes over the face of the key slug and shows at a glance when perfect alignment of each justification is attained. This device is designed to read variations of 2 pts. which in our case is the thinnest space or character in the font. With this attachment the operator can set tabulated and vertical rule composition like the enclosed samples almost as fast as straight matter can be assembled.

One of the samples is from an 80-page Class Schedule booklet of which 72 pages are similar to the sample. The total machine composition time on this job averaged slightly less than 1 hr. per page which is at least 30% less time than other methods have required. This job was set on two slugs 23 and 25 picas respectively. The first slug contains 7 justifications and the second slug 6 justifications each one requiring vertical rule alignment. The dehydration table, likewise, was set on two slugs with numerous justifications on each. The box headings, however, were cut in.

New Board of Governors, International Association of Printing House Craftsmen—Front row (left to right): Immediate Past President Eric O'Connor, Production Manager, Federated Press, Ltd., Montreal, Can.; President Harvey Glover, who is president of Sweeney Litho Co., Belleville, N. J.; Secretary, Herbert Threlfall, President of John F. Greene Co., Providence, R. I.; Treasurer, Charles F. Gainer, Composing Room Superintendent, the Harvester Press, Chicago. Back row (left to right): First Vice President Walter F. Schultz, Production Dept., Texas Farm and Ranch Pub. Co., Dallas, Tex.; Second Vice President H. Guy Bradley, Production Manager of Eli Lilly & Co.'s printing department, Indianapolis, Ind., and Third Vice President Wm. H. (Bud) Griffin, Manager of Griffin Bros., San Francisco, Calif.

Not shown in this picture are President Glover's appointees for 1943-44 to the International Board. These are: Chairman of the Educational Commission Douglas C. McMurtrie who is Typographic Director of Ludlow Typograph Co.; Chairman of the Publications Commission John E. Cobb, composing room foreman, Western Printing & Litho Co., Racine, Wis., and Representative-at-Large Howard N. King, who is Typographic Counsellor to Intertype Corporation, and Typographic Director of Maple Press, York, Pa.

Craftsmen's Convention

held in Memphis reacts as a group to WPB representatives' suggestions that executives voluntarily do something to aid war effort

THE XXIVth annual convention of the International Association of Printing House Craftsmen was a serious affair. Of particular note was the prompt reaction of the convention to the three talks made by Printing and Publishing Division executives of the War Production Board. This reaction took the form of unanimous adoption of a resolution through which the convention recommended that every local Craftsmen's Club (around 60 clubs) devote either their September or October meetings to the discussion by their own members of ways and means for the conservation and elimination of waste in the use of paper, copper and other critical materials. Incidentally, this resolution was the only one to be passed by the convention.

At the clinic sessions, there was considerable discussion related to the manpower problem as it affects the printing industry. Technical problems brought about by war shortages, dominated the utterances of those who spoke. There also was much discussion about new technical developments.

Memphis Hospitality

The convention was held at Hotel Peabody in Memphis, Tenn., on Tuesday, Wednesday and Thursday, August 10, 11 and 12. The total registration was 364 of which 287 were men and 77 were ladies. Ray F. Brown, Superintendent of the Peabody Printshop, was general convention chairman. Right here, *Printing Equipment Engineer* wishes to observe that Craftsmen soon forgot any discomfort caused by the much pre-publicized Memphis summer heat. Certainly, it wasn't any worse than 1936's Minneapolis meeting, Cleveland in 1937, or Boston in 1938. Anyhow, Southern Craftsmen exhibited splendid cordiality and traditional spirit. The 1943 Craftsmen's convention will long be remembered for the solicitous execution of arrangements made by Chairman Brown, Horace and Mrs. Kelley, Clarence Ritter, Joseph Dorsey, S. Toof Brown and the entire committee membership.

No. 1 Critical Material

Now, getting back to our convention report, the three WPB representatives who addressed the meeting, each brought a realistic picture of the equipment and supplies situation in relation to the Graphic Arts industries, principally with respect to paper which is now said to be the No. 1 critical material. The speakers made it plain that it is an obligation of the printing industry to do something about conservation from a voluntary standpoint.

Being A Better Executive

After the formal convention-opening ceremonies had been conducted, Hon. John J. Deviny, Deputy Public Printer, of the U. S. Government Printing Office, was introduced. Mr. Deviny gave an exceedingly inspirational address which was devoted largely to leadership. Specifically, with reference to printing executives, he said:

"The Craftsman at home, being as he is an industrial leader, can contribute not only to his personal progress but to his industry's advancement through being a better foreman, a better superintendent, or a better executive, in whatever capacity he may serve. The day of the old-time, hard-boiled foreman is past. Brute force and a display of rough temperament with a blatant exhibition of authority never did much for management and less for labor. In most instances these days, workmen respect a foreman or a superintendent not just because he is the foreman or the superintendent, but because of a deeper-rooted recognition of his ability and his knowledge of his craft or trade. This type of respect is permanent and wholesome. It frequently continues long after a personal liking for the individual may have passed.

"Personal qualities are the real foundation for success or failure.

"A good executive stimulates the initiative of those who work with and under him, encourages new ideas and the self-improvement of the individual.

"The critical, exacting executive secures only paid service from his workers, but a supervisor who conducts himself so that his own work is a standard for proper achievement gets better results and gets them more quickly.

"In these days of manpower shortage, personnel should be salvaged. The use of tact sometimes looked upon as an exhibition of weakness—it isn't so!

"Use speech effectively. Not only mean what you say, but say what you mean.

"Honesty, truth, courtesy and consideration for others are not only good morals but also good business practice."

Link Urges Voluntary Group Cooperation

Leon A. Link, besides presenting a picture of present conditions, urges voluntary cooperation by industry with the war effort. He stated that further restrictions of supplies and materials could be postponed for a time if members of the industry will devote their best efforts to conservation of these materials now.

He said: "During the past 17 months I have spoken at meetings from Boston to Los Angeles. I am not criticizing the interest that has been so evident. It has been my observation that these meetings have thought pretty much of their own interests and have given too little, if any time to the formulation of a program that would enable them as an organization to make some contribution to the war effort. I want to suggest that this conference devote some time to that most important question. When you adjourn on the final day, let us leave here feeling this has really been a war conference of the Graphic Arts, and that something constructive has been done to help with the winning of the war."

Schneider Impresses Seriousness of Paper Supply

Acting Deputy Director Philip S. Schneider discussed the paper situation in general and specifically as it applied to the printing industry, from the tree to the finished product. His discussion was carefully prepared so as to bring home to the industry the seriousness of the paper shortage. Lack of manpower in the woods is the real cause of the shortage, plus diversion of immense quantities of wood fibre for war purposes.

Quoting briefly from Mr. Schneider's address, he said: "Our job is to service the war industries and our essential civilian economy. In doing this job we will be forced to reduce our less essential civilian uses of paper. Printers have in the past had three things to sell—quality, service and cost. In this market where the number of impressions is the selling factor, we must revise our concepts and sell yards of paper. To the intelligent buyers of printing in a war economy the old three standbys recede into the background and it is a question of—do I get it?

"Where do we fit in this *wheel of war?* We fit only up to our ability to give *strength* to the rim. There is only *one* wheel—only one war, and only one goal —Victory!"

Wolff Asks: "What Sacrifice Has Industry Made?"

John M. Wolff, Jr., Chief of the Planographic-Related Services of the Printing and Publishing Division, discussed not only the paper situation, but he also discussed a number of WPB orders which govern the printing industry. The speaker reminded Craftsmen that a battle cannot be fought with men along—it takes men and materials in unlimited quantities.

Mr. Wolff asked a rather pointed question: "With the exception of manpower, what sacrifices have the printing and lithographic industry made?" He ventured the opinion that it has been "business as usual" in practically every shop.

"You will ask," he continued, "what sacrifices can I make that will help the war effort? Well, you can see to it that you do not carry any idle inventory of any of the various materials which you use daily, that waste is eliminated or reduced to the absolute minimum. See that your customers are practicing every possible economy in the production of their printed matter, both as to format, size, weight of paper used, and designed to fit your mechanical equipment, so as to make the maximum use of your available manpower.

"It is the opinion of our division that the printing and lithographic industry has not made the slightest sacrifice and if this condition is permitted to continue, you are in for a sad awakening—but, then it will be too late to make amends. And, if this assembly is what the name implies—a war conference—then, some action should be taken, some definite recommendation made to prevent such a possibility."

Technical Clinics

THE five technical clinics were of so much value that executives felt they had been greatly benefited by the ideas expressed. In most of the clinics, set addresses were not in order, the discussion being offered spontaneously. Supplemental discussion from the floor in a number of cases discussion became quite spirited. Audience interest did not lag at any time.

Typography and Composing Room Practice

THE Typography and Composing Room Clinic was held Tuesday afternoon, August 10. Manager Michael Stevens of John E. Weiss & Son, New York printers, introduced Co-Chairman R. N. McArthur, a type designer and efficiency engineer of Atlanta, Ga.

Mr. McArthur discussed the development of modern typography and gave credit to a number of men who have advanced the art. He referred to Howard King, typographic director of the Maple Press, York, Pa., who is also typographic counsellor for Intertype Corporation as a man of 144 pt. ability. Mr. King could not be present at the convention because of a death in the family.

"In a real sense, there is no sectionalism in typography," said Mr. McArthur. "There is no North, no South, no East, no West in the manner in which type is

(*Continued on Page 14*)

Some Craftsmen attending the 1943 International Craftsmen's Convention in Memphis, Tenn., August 10-12.

1—Production Manager R. J. Richardson, Memphis (Tenn.) Publishing Co.; Mrs. A. Horace Kelley, Chairman of the Women's Convention Committee; C. C. Chadwick, Manager, New Orleans Agency of Intertype Corporation.
(Photo courtesy Intertype Corp.)

2—Retiring President Eric O'Connor (Montreal) passes the gavel to newly-elected President Harvey Glover (New York).

3—Fred A. Hacker, Offset Sales Manager, American Type Founders; A. G. Fegert, Trade Press Representative, Chicago; Clarence Groettum, Superintendent, Jensen Printing Co., Minneapolis.

4—Michael Ivers, Chicago Craftsmen's Club; R. P. McCarthy, president Chicago Craftsmen's Club; Joseph Skatch, Production Manager, D. F. Keller & Co., Chicago; Douglas C. McMurtrie, Typographic Director, Ludlow Typograph Co., Chicago.
(Photo courtesy Intertype Corp.)

5—John Morehouse, Printing Machinery Co., Cincinnati; Robert Thiele, Superintendent, U. S. Printing & Litho Co., Cincinnati; Philip S. Schneider, Acting Deputy Director, Printing and Publishing Div., WPB; Michael R. Stevens, Manager, John E. Weiss & Son, Inc., New York, N. Y.

6—Floyd M. Wolfe, Director of Planning, The McBee Company, Athens, O.; Robert Armstrong; Herman Slater, Pressroom Supt., The McBee Company, Athens, O.

7—Charlie D. Adkins, District Manager, Geo. H. Morrill Div. General Printing Ink Corp., Chicago; A. Horace Kelley, Manager, Kelley & Jamison, Memphis; Ray F. Brown, Superintendent, Peabody Print Shop, also general convention chairman, Memphis.

8—Jack Senter, Intertype Corporation; R. J. Richardson, Production Manager, Memphis Publishing Co., Memphis, Tenn.; Al Wilder, Advertising Agency, Chicago, Ill.

9—V. E. Fishburn, Vice President and Tony Messina, Technical Representative, Burgess Cellulose Co.

10—Al Cavender, Marshall & Bruce Co., Nashville, Tenn., discusses a pressroom problem with John L. Wybest, assistant foreman of Webb Publishing Co., St. Paul, Minn.

11—George Greenberger, Superintendent, J. W. Clement Company, Buffalo; Mannie Hubbell, Meredith Publishing Co., Des Moines; John E. Cobb, Western Printing and Litho, Racine, Wis., also editor *Share Your Knowledge Review*.

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Photo-Plastic Non-metallic Halftone Process It Is Thought Will Be Useful In Critical Copper Conservation

A NEW non-metallic halftone cut-making process, while not yet ready for the market, will make its appearance before long. Depth of interstices between the highlight dots (100-line screen and up) is 0.0035 in. to 0.004 in. The halftones may be printed from direct or may be wax or lead-molded in a direct-pressure machine. At present, none of the materials are on a priority basis. Its use at the present time, it is said, will help in the conservation of critical copper, especially for publication work. The process has been named Photo-Plastic. Its inventor and developer is Joseph T. Cochran, of Chicago, who has been granted patents with other patents pending. Mr. Cochran, it will be remembered, made non-metallic halftones under the trade name Ebolite. That process, however was abandoned some time ago.

The Photo-Plastic cut-making process was discussed briefly during the *New Developments Clinic* at the recent Memphis Craftsmen's convention by Chairman Douglas C. McMurtrie, of the International Craftsmen's Educational Commission. Since then, *Printing Equipment Engineer* has obtained additional information.

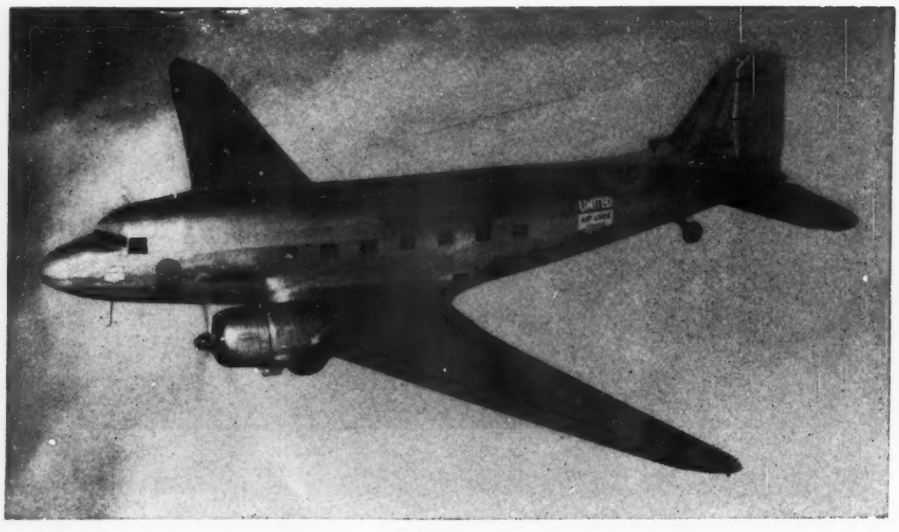
The operation of making a Photo-Plastic plate is purely photographic. A plastic 16 ga. base (approx. 1/16 in. thick) supports a light-sensitive coating. A negative is made in the usual manner and is placed in contact with the photo-plastic material in a vacuum frame. It is exposed for 3 min. and is then developed for 2 min., after which it is placed in a hypo bath. After clearing, the plate can be worked on locally to reduce dots. It is claimed a fine control can be had over the negative which materially reduces correcting work.

The next operation is to wash the plate and place it in a No. 1 and a No. 2 bath successively for pre-determined periods. Upon drying, the plate is trimmed to size in a guillotine or paper cutter. If the plate is intended for direct printing, it is mounted on wood base with a special cement, the block being trimmed afterwards to the size of the plate.

The following technical notes will be of interest. It is claimed that (1) The depth of halftone screens (from 100 line up) is 0.0035 in. to 0.004 in. in the highlights. (2) Depth is controlled by the thickness of the light-sensitive coating on the plastic base. Therefore, the 200 line screen depth is the same as that of a 120-line screen halftone. (3) For this reason, fine screens (such as 200-line) can be printed on ordinary enamel stock. (4) Duplication is readily feasible since an additional exposure will produce another plate which is processed at the same time as the other plate. (5) Photo-Plastic plates may be lead- or wax-molded or stereotyped on direct pressure machines. (6) Flush-mounting is provided by reason of plate being held to mounting block by adhesive. (7) The plate can be tooled or burnished. (8) It is possible to incorporate an automatic makeready in the halftone, that is, the blacks are in the highest plane, the middletones are slightly below the solids, and the highlights are below the other tone areas. This makeready is provided in the plate according to tones. This difference in height of the printing surface is optional, since the plate can also be produced with all-over level surface. With the makeready feature in the plate, there is a difference of 0.0015 in. between the solids and the highlights.

At the moment, it seems there are no production data available as to the length of run which may be obtained from Photo-Plastic halftones on a cylinder press by direct printing. The plates, however, have been molded by direct pressure to produce plates for publication work.

It is planned by Mr. Cochran's company to license the Photo-Plastic process to reputable companies without fee. His company will sell materials and chemicals only. Announcement will be made when the Photo-Plastic process is available for license.



This illustration was printed direct from a Photo-Plastic cut. This cut was made from a hand-coated plate. Mr. Cochran states that when process is ready for market all plastic-base will be machine-coated.

(*Continued from Page 12*)

set. The typographers of the past and the men of today have put the art of printing on a higher plane. Trade publications are doing a valuable work and our own international educational commission is contributing definitely to the advancement of the industry."

In answer to a question which Chairman Stevens read concerning effects that the limitation of the WBP had upon typographic trends, several were reported. One was that newspapers are now setting more type in their own offices for advertisements than formerly; that type itself without the aid of decorations and borders must tell its own story; new type faces are not now available. One effect of the scarcity of paper is said to have increased the use of condensed type.

Pre-makeready

Russell Hogan, Superintendent of the Wickersham Press, New York, was requested by Co-Chairman Stevens to discuss what if anything further is being done to develop pre-makeready in the composing room. Mr. Hogan enumerated the different operations which should be performed on form elements before the form is sent to the foundry or the press preferably by a man with press-room experience. Pre-makeready operations, however, will vary from plant to plant according to size and according to the facilities in the plant. When properly done, pre-makeready technique in the composing room cuts down idle time in the pressroom and expedites handling of jobs in the plant. He added that a study should be made in the pressroom of the shortcomings of each type of press so as to facilitate securing best results. He added: "If presses are not maintained properly, all pre-makeready will be nullified."

Some discussion arose as to how to get best results from a form containing material from the several types of composing machines. It seems that the one who brought up the question has had press-room makeready trouble. It was brought out in the discussion that irrespective of the machines from which the slugs or type are secured, if the trimming knives, molds and machine adjustments are maintained in good order, no undue difficulty should be experienced by the pressman.

Source of Faulty Form Elements

"In many cases," remarked one Craftsman, "faulty slugs or type are being produced simply because either the supervising executive or management is unwilling to grant proper time for maintaining machines in good adjustment. In some cases, management is unwilling to bear the expense required to replace worn-out or damaged parts upon which the accuracy of the type is dependent. All composing machines are made upon a precise basis and accurate material can

be obtained from all of them. Slugs and type cast within close type high and body measurement limits are being obtained in regular production manner in many plants throughout the country.

In reply, Mr. Hogan remarked: "It makes no difference if all type in the form is within close tolerances. Pressmen don't care what's in a form—slugs, type, cuts, electros, stereos—so long as all material is type high."

Consideration of precision methods led to the assertion by one executive that owners of plants frequently purchase trade composition on a price basis with the result that composing room foremen and pressmen have to put in valuable time trying to make adjustments because of faulty slugs. One trade compositor objected to the inference that a trade plant has a different standard of production for the buyer who places an order on a competitive price and the customer who sends in his work on an open price basis.

Labor Problems

The shortage of labor was a question that arose in practically every session of the 1943 Craftsmen's convention. It came up during this Typographic and Composing Room Clinic. Someone wanted to know to what extent women have been trained to take men's places in the composing room. The discussion got off to a side endorsement about the excellence of women composing machine operators. Chairman Stevens reminded Craftsmen that the question did not refer to the capabilities of women as workmen in several capacities in the composing room, but to what extent women had been trained since outbreak of the war to take men's places. During the balance of the discussion it became apparent that little if anything had been done with women-training because of the necessary apprenticeship which they must serve before becoming proficient, and to the further fact that war industries pay more money after a brief training period than can be paid in the Graphic Arts Industries. Some executives have resorted to calling back into service men who have been retired, in an effort to alleviate the problem. It seemed to be agreed that some effort should be made to hold skilled men in the composing room rather than to attempt the employment of women.

Storing Seldom-Used Foundry Fonts

Walter F. Zahn, of Zahn Typesetting Company, Milwaukee, inquired about the best method for storing fonts of type which it is necessary to hold because of occasional reorders of the same job. It was suggested that the fonts be wrapped just like typefounders would wrap them and store them in a suitable place with proper indexing cards so they could be located when needed again. Haywood Hunt, San Francisco typographer, stated it is a good practice to place the type in order on galleys with leads between the rows. The galleys are then placed in a rack with suitable indexing arrangement for future reference. Chairman Stevens stated that in his plant reproduction proofs are taken at the time the job is set so that if a job is repeated in the future a line-cut can be made from the proof, or the proof can be used if the job is to be reproduced printed by offset.

The question about a substitute for type metal was raised. Manager W. C. Roddy, of the Metals Refining Division

New Electrotype Molding Process Used in Magazine Production

By MANNIE HUBBELL*

**Planning Dept., Meredith Pub. Co., Des Moines, Ia. These notes were reported during the New Materials and Processes Clinic, Craftsmen's Memphis Convention, Aug. 11, 1943, at which Mr. Hubbell spoke, augmented by an interview with Mr. Hubbell following the clinic.*

THE Meredith Publishing Company's policy of taking active interest in new technical developments in the printing industry oftentimes results in improved production changes of immense value. When the Capital City Printing Plate Company brought to Des Moines the new patented process of molding plastic as a substitute for wax used in the electrotyping process, wholehearted support was extended by the Meredith engineering and mechanical staff. Present experiments are proving satisfactory.

This process, which is in reality revolutionizing the molding operations of electrotype manufacturing, was developed at the Battelle Memorial Institute, Columbus, Ohio after 2½ years of research. The sponsors are a group of eleven progressive electrotyping firms, organized under the title Printing Plates Research, Inc. The development for actual production is assigned to the Des Moines firm; and with the assistance of the engineers of the Monomelt Company, Minneapolis, the necessary units are designed with proper temperature controls for speedy operation. After testing these units, it was advisable to make certain changes, but at this writing the practicability of the process is unquestionable. The only likely changes evident, we are told, are in the thickness of the material and in the selection of the proper height of type form spacings to obtain the best results.

The September issue of *Better Homes & Gardens* inside pages with the exception of page 74 were molded in plastic material, silver sprayed, started with nickel, followed with iron, and shell completed with copper. In the September issue of *Successful Farming*, also published by the Meredith Publishing Company, the entire issue, including 4-color process as well as inside pages, was produced from plates molded by this new process. Plates in multiple were produced from a single mold.

The material used is a sheet of plastic 0.020 in. thickness and manufactured in sheets, size 20 in. by 50 in. The operation consists of cutting the sheet to proper size, warming the subject to be molded, applying the sheet of plastic, covering with a number of sheets of packing paper, applying a special temperature heating unit and at the proper time placing it in the molding press for the final impression. The plastic mold is then removed, given a spray of silver for conductivity, and placed in the plating tanks for shell deposition. The regular procedure of electrotyping follows. The mold is not distorted by shell removal and can be resilvered without any limitation as to the number of shells produced. The plastic material softens under heat and can be used over and over again.

A feature is best illustrated by the fact that two separate pieces of material can be placed over a halftone and type combination form, the edges of the material lapped and molded. After this impression, the mold shows no evidence of previous separation.

E. G. (Mannie) Hubbell

Although the writer never pretended to be a prognosticator, yet we are of the firm belief that in due time electrotypers will be familiar with the progess so that advertising agencies can forward plastic molds through the mail in lieu of electrotypes or original engravings. Its prominence for national usage will probably be accomplished rapidly as a post war development.

The cleanliness of the plastic molding operation and the resulting benefits to the health of those engaged in the field of platemaking is no small resultant benefit of the results of research. The printing field in general surely owes a salute to these eleven forward-looking electrotype companies, the engineers of the Battelle Menorial Institute, and the cooperating Monomelt Company for their grand accomplishment.

The Offset Platemaking and Printing Clinic at Memphis Craftsmen's Convention was extremely interesting—conservation ideas predominated. Here are shown (left to right) Co-Chairman Jack L. Hagen, Superintendent, Workman Mfg. Co., Chicago; Lithographic Specialist George Kearsley, Edward Stern & Co., Inc., Philadelphia; Research Director Chas. F. King of Lithographic Technical Foundation; Research Director Wm. H. Wood, Harris-Seybold-Potter Co., Cleveland, and President Harvey Glover, Sweeney Litho Co., Belleville, N. J.

(Photo courtesy Kent Perkins)

of The Glidden Company answered by saying that a soybean derivative has been used to make type to replace wood type and that experiments introducing printing elements from aluminum powder had been carried on. He added: "It will be a long time before a plastic for casting type can be obtained unless the machine is designed specifically for the purpose." He added there was no present necessity for making the change since type metals were plentiful.

At a later clinic at which scarce materials was discussed Vincent J. Ryan, of Chicago, manager of Federated Metals Division of American Smelting and Refining Co., remarked that there was a year's reserve of type metals available and that no priorities were needed for buying it.

A lively discussion resulted from the query as to why commercial platemakers could not produce as good a stereotype mat as did newspaper plants. One opinion was that it was inadvisable to risk foundry type in the making of a stereotype mat because of the molding pressure required to transfer the original impression from the type to the matrix material.

Pressures Compare Favorably With Other Processes

Henry (Tony) Messina, representing the Burgess Cellulose Company, of Freeport, Ill., took issue with several remarks. At a later clinic dealing with platemaking, he had a better opportunity to describe the stereotype platemaking process which is being used extensively in commercial magazine and book plants throughout the country. The process can be used to reproduce halftones up to 133 line screen. Molding pressures can be and are controlled to as little as 400 lbs. per square inch, in commercial houses in everyday production routine. Printed specimens were shown later to inquirers.

Haywood Hunt arose to suggest that a great need by typographers could be satisfied if typefounders would cast and typesetting machinery manufacturers would provide more of the "in-between" sizes of the type faces now in existence. For instance, by way of illustration, he said he had often wished for the 16 pt. size of several type faces for use in display typography.

Club Management Clinic

ON Tuesday evening, August 10, Douglas C. McMurtrie, Chairman of the International Educational Commission, presided at the Club Management Clinic. The purpose of the meeting was to consider program building, membership campaigns and other matters concerning local club management. He outlined plans for the coming year. Among the aids suggested were use of material prepared by the so-called research commission, quiz programs, stereopticons with "canned" speeches, and outlines for home-talent programs.

Among reports concerning patriotic, educational and promotional work done by local groups, was one report by now Third Vice President Wm. H. (Bud) Griffin, manager of Griffin Brothers, San Francisco, telling about Pacific Coast Craftsmen, who assisted in various kinds of service in connection with black-outs and dim-outs during the past year; the promotion work of the Columbus (O.) club by which its membership was increased from 54 to 129 in eight months; the training-of-officers plan of the Chicago club; the series of lectures for the benefit of apprentices given by the Philadelphia club, and others.

Des Moines and Boston representatives suggested that the various clubs should utilize opportunities to increase the prestige of the various clubs and the

The mid-year Harris calendar is now being distributed. The painting from which the calendar was reproduced was made by T. M. Cleland, using "God Bless America"—the theme of the past two Harris calendars. Mr. Cleland has this year, broadened his portrayal to include the United Nations—the title, "God Bless America and Her Allies". The Statue of Liberty and the surrounding figures of the United Nations symbolize the barrier beyond which the destructive forces must not trespass upon human liberty. This painting was lithographed in four colors by Rogers-Kellogg-Stillson, Inc., New York. Plates were made by Offset Engravers Associates, Inc., New York.

printing industry itself by means of newspaper publicity. In that connection it was suggested that the clubs might observe during some time next year the fiftieth anniversary of the development of three and four process color production. The plan would include an exposition of color printing by both the letterpress and offset process, the enlistment of other groups in each city as cooperators, and a meeting at which the beginnings of process color work would be described.

Elimination of waste was urged in a brief talk by Frank M. Voelkl of Dayton Club. He told of a man in his plant who threw some sheets of good paper in a crate of waste, whereupon Mr. Voelkl threw some money on top of the sheets. When the workman asked Voelkl what it all meant he replied that the money was no more valuable than the paper which had been thrown away.

New Materials and Processes Under War Economy

PLASTICS were discussed at several of the conferences, the principal inquiry about them being in connection with plastic plates as substitutes for electrotypes and copper halftones. Most of the discussion came in connection with the clinic, *New Materials and Processes Under War Economy*, which was conducted by Clarence Groettum Superintendent of the Jensen Printing Co., Minneapolis, and Edward Patton, of Toronto.

At the conference on platemaking, other reports were made, one by E. G. Hubbell, Planning Department, Meredith Publishing Co., Des Moines who showed specimens of plastic molded electrotype plates made by a commercial platemaking concern. These plates were used experimentally in place of lead-mold plates and gave satisfactory service.[1]

Gradie Oakes, of Chicago, referred to plastic halftone plates, 15,000 of which had been made for one company. In reporting on molded plastic plates, Mr. Oakes said some progress had been made. These plates have been tried on fast presses using heat-set four color process inks, but the plates were unfavorably affected by the tremendous heat after from 28,000 to 35,000 impressions had been run.

"Install Your Own Molding Machine',

"If you are interested in working on experiments with plastic plates as substitutes for electrotypes, install a molding machine in your own plant," suggested Mr. Oakes. "You will be more lenient with your own errors than if you print from plates delivered by electrotypers to you."

Mr. Oakes said manufacturers are working on new improved plastic materials to withstand heat.

Mr. Oakes was asked to report on the use of engraved rubber plates. He replied that the shortage of raw materials has practically put his company's rubber plate business out of commission during the war except for their use in printing targets for the U. S. army. These paper targets of various sizes and varieties have been printed from engraved rubber plates by the millions, and almost unbelievable performance records have been made. He reported that the best record was one made by Manz Corporation, Chicago, in whose plant 1,800,000 impressions were obtained from one set of rubber plates.

[1] See supplemental discussion by Mr. Hubbell elsewhere in this issue of *Printing Equipment Engineer*.

Use Book Cloth Which Is Available

In the consideration of shortage of materials, Amos W. Bishop, manager of the University of Chicago Press, outlined a policy of buying as much book cloth as possible for reserve stock and then using the kind for production work that is obtainable. He said when his customers complain about not getting what they want, he simply tells them, courteously, that it is not a question of getting what is wanted but taking the next best thing. He said that the book cloth situation is improving.

Philip McAteer of the New England Electrotype Co., Boston, spoke enthusiastically about the future of platemaking. He predicted that within five years after the conclusion of the war electrotypers will be making better plastic plates. They will be better than printers can make in their own plants. At the present time, he stated, he knows of fourteen concerns that are making plastic plates and are spending a considerable amount of money experimentally. The electrotyping industry is on its toes and is eagerly developing new methods for producing better plates.

Manpower Training for Industry

The discussion drifted into difficulties caused by lack of manpower in the printing industry. It was asserted that United States executives in Washington, D. C., feel the printing industry is an essential one. In fact, Government agencies are demanding cooperation in this respect, because they feel the industry is essential to winning the war. Irrespective of this feeling, the industry has not been openly declared essential to the war effort.

PRESSROOM SHOULD NOT BE USED AS A LABORATORY[1]

ANOTHER point that might be well to keep in mind is that mechanical problems do not represent *all* the problems in the pressroom. There are chemical problems as well. That is why we have two complete laboratories that do nothing but experiment with ink, paper and offset problems. After all, a printing press only coordinates paper and ink to produce a printed product, and there is a lot of chemistry that takes place between the rollers, printing plate, ink and paper. Some inks, especially blues, attack copper plates. Some papers have no receptivity to certain inks. Certain inks will pick the surface of the paper. The pressroom is not a laboratory in which to solve these problems.

[1] Extract from paper delivered by Superintendent George Greenberger of Buffalo's J. W. Clement Co., before the Memphis International Craftsmen's Convention, August 12, 1943.

Fifth District Craftsmen held annual meeting at early morning breakfast, Hotel Peabody, Memphis, Tenn., on Wednesday, August 11, as guests of Fifth District Representative Ollie G. Fricke. About twenty Craftsmen were present. In this picture, from left to right are: Robert Thiele, Superintendent, U. S. Printing & Litho Co., Cincinnati; John M. Callahan, Past International President, and Secretary of the U. S. Printing & Litho Co., Cincinnati; International Vice President Guy Bradley, Production Manager, Eli Lilly & Co. printing division, Indianapolis; International Vice President Walter F. Schultz, Production Department, Texas Farm and Ranch Pub. Co., Dallas, Tex.; John Fisher, Fifth District Secretary, Detroit, Mich.; Ollie G. Fricke, Dayton (O.) Manager for Sinclair & Valentine.

THE INTERNATIONAL ASSOCIATION OF PRINTING HOUSE CRAFTSMEN IS PROUD TO PRESENT THIS

CERTIFICATE OF COOPERATION

TO

Printing Equipment Engineer

AS AN EXPRESSION OF APPRECIATION FOR THE TANGIBLE ENCOURAGEMENT THIS COMPANY HAS GIVEN TO THE FURTHERANCE OF THE EDUCATIONAL ACCOMPLISHMENTS OF INTERNATIONAL CRAFTSMANSHIP WITHIN THE GRAPHIC ARTS

Signed:
International Association of Printing House Craftsmen

In July, *Printing Equipment Engineer* received this Certificate of Cooperation from Past-President Frank McCaffrey of the International Association of Printing House Craftsmen. The awarding of these Certificates was a project of the International Board during Mr. McCaffrey's presidential incumbency. Apparently, the project was completed just recently. We appreciate the award.

To some extent, the plan of securing future printers is being utilized by a mid-Western Craftsmen's Club, Printers are working through a boy's club which is interested in printing. Contributions of equipment, such as a paper cutter and the like, have been made to the club. Many of the boys now are working in printing plants. A Chicago Craftsman related that a number of plants in that area had engaged the services of handicapped boys. In one instance, a mute is doing excellent work as a messenger boy.

Several experiences were related about the training of women. In one case, eleven women—wives of soldiers—were hired in a pressroom where they were trained to work. After the training period had progressed and the superintendent expected to realize some value from the experiment, ten of the women quit work to join their respective husbands in cities near which army camps were located to which the husbands had been assigned. The eleventh woman was also planning to quit, so that the plant superintendent considered his experiment a total loss.

Ray F. Brown, superintendent of Peabody Printshop, Memphis, and who also is secretary of a Southern Selective Service and Appeal Board which has jurisdiction in several counties in the Memphis territory, stated the board can give skilled craftsmen under 38 years of age from two to six months deferment from the armed services. He encouraged printing executives to "go to bat" for proper consideration of their skilled employees. He said that in cases where local draft boards did not consider printing an essential industry, the printers who could not replace compositors or pressmen were advised to file a protest on the proper form and request a review of the case by the appeal board.

Photo-composing for Letterpress

Editor Ernest F. Trotter of *Printing*, discussed informally the photo-composing machine as applied to use by letterpress printers. He observed that the machine originally had been developed for use by photo-engravers who did not adopt it generally. The offset-lith industry, however, was quick to utilize the machine for platemaking purposes.

MacD. Sinclair, editor of *Printing Equipment Engineer*, discussed briefly the step and repeat equipment announced not so long ago by the Lanston Monotype Machine Company for use by letterpress printers and engravers. It seems there are some half-dozen installations in several parts of the country. One is used for making color plates for a Philadelphia pharmaceutical supply house. Two installations in the Carolinas are used for making step-and-repeat plates for printing cigarette wrappers. The Sharon (Pa.) *Herald* engraving department uses its equipment for making metallic data plates for a large manufacturer of transformers, generators and motors. Another use to which it is put is that of making metallic name and memorial plates, besides letterpress and offset-lith step-and-repeat printing plates.

Electronics

Chairman Groettum brought up a question related to electronics as applied to the printing industry. One speaker stated that, as laymen, printing executives were not expected to understand fully the exact working technique of electronics, but as a group they should study the subject with respect to application in the industry. Those present were referred to an article upon the subject (written especially for the layman) by W. D. Cockrell of General Electric which appeared in the July issue of *Printing Equipment Engineer*. Some of the applications were mentioned such as electronic motor control for driving printing presses and a timer to regulate exactly the cooling period for stereotype plates. There are many other applications in the industry. After the war, undoubtedly, electronics will be adopted for many duties in the production departments of printing plants.

At this juncture, Douglas C. McMurtrie exhibited and discussed a new non-metallic halftone cut making process developed by J. T. Cochran of Chicago. The process has been used experimentally by a weekly magazine. Possibilities of the new process with respect to conserving critical metals were discussed.

I. Q. Test for Apprentices

A question was submitted in which the inquirer wanted to know if anyone had prepared an I-Q test for use by employers in examining those who wish to become apprentices in the printing industry. Clarence Groettum, Superintendent of Jensen Printing Company, Minneapolis, stated that Dunwoody Institute, Minneapolis, had prepared such a blank and that a copy of it could be secured by writing the Institute.

Water-Base Ink

Someone asked about the new water-base ink for newspaper and other soft-paper rotary printing. Douglas C. McMurtrie and MacD. Sinclair discussed the subject briefly. Auburn Taylor, pressroom superintendent of the Charleston (W. Va.) *Gazette*, started working on this type of ink several years ago. The United Carbon Company, also of Charleston, has been cooperating in perfecting the ink through its research chemist, Dr. I. Drogin. Since rotary printing from first to second impression is so rapid, it is the objective of the inventor to eliminate first impression offset, strike-through and also rub-off of the ink after the paper gets into the customer's hands. It was stated that because printing presses may have to be modified in design, there is little likelihood of either the ink or the presses being used regularly, at last report, in the plant of the Charleston *Gazette* on one press unit. In a recent progress report[1], it was

[1] See pages 51, 52, 53, June 1943 issue *Printing Equipment Engineer*.

TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer. *We'll be glad to pass your request on to the manufacturer. Literature is gratis except where noted.*

Inks for Kromekote Stock

The American Printing Ink Company, Division of Genera Printing Ink Corporation, has just issued a folder to demonstrate the results that may be obtained by using special inks developed for printing on Champion Kromekote stock. These inks, states American, are so made that they neither add to, nor detract from, the lustre of this particular paper. In addition, they can be made either transparent or opaque in the same manner as regular types of ink. Copies of the folder, entitled "Ingenuity", are available upon written request to American Printing Ink Company, Division General Printing Ink Corporation, 2314 W. Kinzie Street, Chicago 12, Ill.

Solving Industrial Crimes

is the title of small illustrated booklet (Case No. 29) in which is discussed how a 50% labor loss in a New Jersey plant was disclosed during an overtime period by a graphic wattmeter. What was done to remedy the loss is also explained. Published by the Esterline-Angus Co., Inc.

ABC of Electronics at Work

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., has published a 40 p. booklet, 5 in. by 7 in. size, entitled *The ABC of Electronics at Work*. The booklet is copiously illustrated with diagrams. While the booklet is dedicated to the army of military and industrial technicians whose duties now include the operation of electronic devices, yet it will be of great interest to printing plant executives who will come more and more in contact with electronics in the near future in the operation of their equipment. In the booklet is visual explanation of the six basic ways in which electronic tubes work. Booklet is No. B-3260.

When the War Ends

This 24 page and cover booklet (6 in. by 9 in. size) in its second edition, presents a summary of the problems to be faced by industry in postwar period and their relation to printing markets. Following subjects are discussed: (1) Nature of Industry's Postwar Problems, (2) Industry's Postwar Opportunities, (3) Checklist of Printing Needed in Postwar Period, (4) Printer's and Lithographer's Postwar Opportunity, and (5) New Papers, New Presses, New Inks—What's Ahead? The thoughts expressed are those of PAC sponsors. Copies of the booklet are available from Herbert Kaufman, General Printing Ink Corporation, 100 Sixth Ave., New York 13, N. Y.

stated also that a few technical problems remain to be solved—one of which is that of "specking" in the print. Sponsors are confident this minor difficulty can be eliminated. The principle upon which the ink works is that the water base is immediately absorbed into the fibres of the paper carrying with it and impregnating the carbon pigment into the paper. This action is so rapid even in relation to the extremely brief period between first and second impressions, that offset is eliminated on the first impression side of the sheet when the second impression printing is taking place.

Math Reports on Ink Conditions

At two of the clinics, the question of ink supplies was raised. It was answered authoritatively by Anthony J. Math, president of Sinclair & Valentine Company, who spoke as president of the National Association of Printing Ink Makers.

"There were scares in the industry about the possible shortage of inks before we got into the war and a propaganda was developed advocating the elimination of colors from printing," said Mr. Math. "There is no such talk now. We are restricted to the use of 60% of organic colors used in 1941, but fortunately we used a lot of it in that year, so that the restrictions are not affecting the industry much. There is no fear of any shortage now. Substitutes have been developed by the research laboratories of the ink makers and some of the substitutes are better than the original materials. We are working with the War Production Board at every stage of development, and our report now is that an improvement is being made in printing and lithographic inks."

Letterpress Platemaking and Printing

THE *Letterpress Platemaking and Printing* clinic was held Wednesday afternoon, August 11. International Vice President H. Guy Bradley, who is production manager of the Eli Lilly Press in Indianapolis, and John L. Wybest, Assistant Pressroom Foreman of the Webb Publishing Company, St. Paul, functioned as co-chairmen.

Ink Makers will Work out all Problems

President Anthony J. Math of the National Association of Printing Ink Makers, who also talked previously at the Wednesday morning *New Materials and Processes* clinic, said there is now no talk of scarcity of ink materials. He explained briefly the WPB restrictions under which the inkmakers are working. Black inks are now being made with less organic toners but alternative materials are being used successfully. Apparently, there is no fear of not being able to obtain ink materials for some time to come. Glycerine, however, for certain inks is somewhat tight. There is every reason to believe ink makers can work out problems in making gloss inks and overprint varnishes.

"Chromatic" Printing

Mr. Wybest exhibited several full size sheets done in color on one and two-color presses. He termed this chromatic printing. The idea is to do multiple color work by utilizing work-and-twist and flop forms on one-color and on two-color presses. The manner in which ink rollers can be cut and fountains split was described by Mr. Wybest. He stated it was cheaper to do a black and one-color job on a one-color press than to put the same job on a two-color press. This printing method is particularly advantageous on long-edition runs. He reported one instance in which 100,000 impressions had been saved by the use of chromatic printing. Because no sheet of paper can be depended upon as being absolutely square, color register on the "flop" or "twist" impression (whichever the case may be) is assured by putting two short lengths of cutting rules (approx. 2½ in. to 3 in. long) at the back edge of the form and one length for the side guide. The cutting rules are made up in the type form, or may be used with patent base. The ends of the rules are curved in at the corners so as to provide approx. ⅛ in. cut-out section at the edge of the paper. To prevent the cut-out sections separating from the sheet and falling into the press parts, each of the cutting rules is nicked slightly so that the cut-out pieces will be delivered along with and as part of the sheet to the delivery.

Mr. Wybest stated it was necessary to have good jogging. The cut-out pieces may be stripped off easily from the pile by using a chisel or screwdriver before sending the sheets next time through the press. Particularly good results were obtained on automatic feed; on hand feed the side guide cut-out can be eliminated to avoid the sheet catching in the side guide.

Old Man Static

Co-Chairman Bradley precipitated a lively discussion from the floor by bringing up the question of static electricity in the pressroom. A number of executives took part in the discussion, among whom were Al Cavender, Marshall & Bruce, Nashville, Tenn.; Herman Slater and Albert Barnes of the McBee Company, Athens, Ohio; and the two Co-Chairmen, Messrs. Bradley and Wybest.

It seemed that all of means for preventing static which have ever been devised were discussed. The discussion was precipitated when one executive stated he could not now obtain a Chapman neutralizer. Mr. Cavender spoke of regulating humidifiers in his plant according to the season. Mr. Slater asserted that the only cure for static electricity is 100% air-conditioning. He described how he packed presses to alleviate static. The uses of kerosene and glycerine were mentioned, as were steam, humidity, gas flames, grounding the press and roller sprays. An executive reported he kept his pressroom temperature precisely at 72 deg. and the ink fountains were adjusted to work at that temperature. Mr. Bradley stated one of the best ways for static elimination is to permit newly delivered paper stock to reach pressroom temperature by allowing it to remain in the pressroom at least 48 hours before putting it in the press.

Co-Chairman Bradley discussed the value of Simoniz Wax as a static eliminator.[2] This wax can be applied to the feed-board of the press, or to any part with which paper comes in contact. On Cleveland and Baum folders, first take off the plates and wash them in gasoline —then use the wax. In his plant, the wax is applied on Saturday night to paper cutter beds and on the following Monday morning is rubbed to a high polish. In addition to being a great aid in getting rid of static, the wax provides a smooth, slick surface upon which to work and is a great aid to cleanliness.

Synthetic Rollers

As is usually the case when printing executives, particularly pressmen, get together, the subject of press rollers arose for discussion. One executive stated that five years ago he had changed rollers on all the cylinder presses in his plant to synthetic form rollers. He stated the rollers are used on halftone and color work on a No. 3 two-color Miehle press. About 700,000 impressions were secured before it was necessary to reset the rollers. Durometer reading of his synthetics is 7. Another executive stated he uses one composition form roller in clean-up position in combination with synthetics. Still another executive stated his firm orders several sets of composition rollers at one time. Thus he is able to use the rollers interchangeably because the shrinkage is uniform.

In the ensuing pre-makeready discussion, Ernest Jones, president of Graphic Arts Corporation of (Toledo) Ohio, paid his respects to wood base for mounting cuts as being entirely undependable. He espoused cuts mounted on plastic base or high quads with adhesive, the pre-makeready preferably being done by a photo-engraver. Chairman Bradley commented that makeready in his plant had been reduced 30% by making all form elements the proper height before sending the form to the pressroom.

Could Reduce Cost 20% "If"

Phil McAteer, New England Electrotype Co., Boston, discussed accuracy in printing plates. He stated that if every printer would send forms to the electrotyper which were as accurate as one particular New England customer, the cost of electrotypes could be reduced 20%. Since his firm has employed precision proofing, checking of original engravings and the like, he now has only 10% of the complaints received 10 years ago.

Mr. Bradley referred to his disinclination to use a line-up table in his plant for

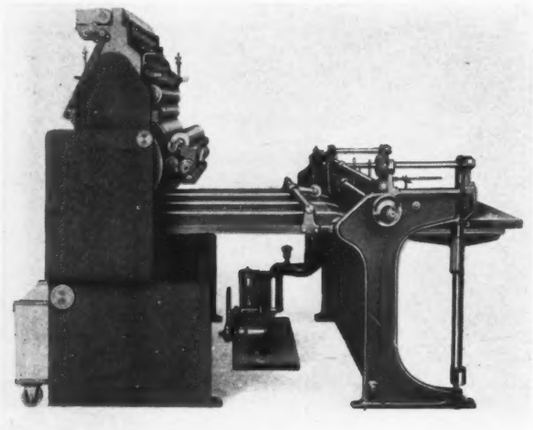
(*Continued on Page 30*)

[2] See page 12, April 1943 issue of *Printing Equipment Engineer*.

Equipment and Supplies

Offset Press Available After the War

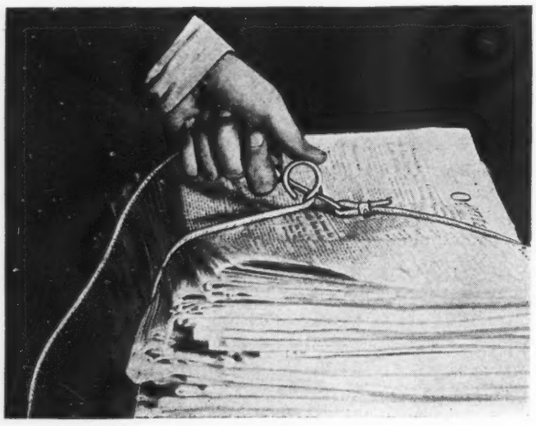
MOUNT VERNON Presses announces development of a 19x25 offset-lith printing press. It has been named the "Jeep Press." Sponsor states "The press has been designed to operate with utmost simplicity. To do good offset work, lots of ink distribution is required —this machine is designed to furnish plenty of it. We have incorporated proper balance between the ink and water distribution. The feeder is simple in design and it is possible to change from one size sheet to another in a jiffy. The war prevented us from putting this machine in production but it will be built when the war ends." No further information is available at the moment.



View of "Jeep Press" which prints by offset-lith process. It is 19x25 size.

Tyups for Bundling Newspapers

In the absence of wire, cord or twine usually used in normal times for the purpose, The Tie Company furnishes a device called a Tyup for bundling newspapers for distribution in areas nearby to the publishing plant. The device consists of a formed metal head which is fashioned somewhat in the shape of a double eyelet, approx. 1¼ in. diam. The Tyup particularly suited for newspaper bundling is 6 ft. in length, although any length of cord can be supplied. The cord itself resembles a hard surfaced clothesline with a metal tip at the free end. Manipulation of the Tyup to fasten a bundle of papers is quickly done since the cord is passed between the double eyelet sections after being passed around the bundle. The bundle may then be lifted by the cord which is held securely by the eyelet. The cord may be disengaged quickly from the eyelet by simply pulling up on the free end of the eyelet. It is understood that since wire, cord and twine are sharply restricted for this purpose, that the Tyups may be secured in necessary quantities. Further information may be secured from The Tie Company direct, or through *Printing Equipment Engineer*.

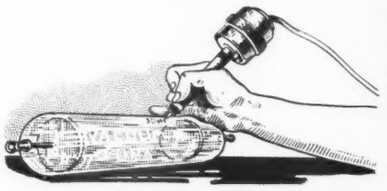


The Tyup may be quickly removed from a bundle of newspapers simply by pulling up on the free end of the cord as shown in this illustration.

Tornado Electric Writing Tool

AN electric writing tool of special design is announced by the Breuer Electric Mfg. Co. It is used for the permanent marking of materials such as brass, marble, tile, glass, plastics, wood, hard rubber, aluminum, steel and bronze for identification purposes.

Writing Tool operates like a pencil and writes as fast as the fingers can move



Tornado Electric Writing Tool cuts identification marks on vacuum tubes. Writes on (cuts into) glass, steel, porcelain, plastics, etc.

at more than 7000 cutting strokes per minute. Plugs into electric light socket. Leaves a permanent, legible mark. Cutting stroke is adjustable for deep or shallow cutting.

Made in different models for light or deep etching, and for operation on 115-130 v., 50-60 cy., a.c. Complete details can be secured by addressing manufacturer in care of *Printing Equipment Engineer*.

Improved Grip-Tight Label Paste

PAISLEY Products, Inc., has announced the new improved Grip-Tite Label Paste, an adhesive for permanently fastening paper labels to metallic and non-metallic surfaces. Grip-Tite is a resin emulsion adhesive. In appearance it is a soft, white buttery paste. Has moderate drying speed to permit operator sufficient time to lay out several labels at once. Claimed to produce a non-crystallizing bond between paper label and the surface to which it is attached to withstand humidity changes, temperature extremes, handling and abuse during shipment. Primarily designed for hand-brushing, but can be applied by many types of table model gluing machines.

May be used for product, shipping, instruction, inspection and parcel post labels, blueprints, maps, circuit diagrams, packing slips, tax stamps, express waybills, etc.

Further information may be obtained from Paisley Products, Inc., direct or through *Printing Equipment Engineer*.

Reanite Bonding Process

A BONDING process which is claimed to unite metals with a bond stronger than riveting or spot-welding, and one which joins rubber, synthetic rubber, plastics, leather on wood, to metal, or to each other, has been announced by the U. S. Stoneware Co. The company enumerates uses for which Reanite is adapted, such as bonding thin sheets of stainless steel or aluminum to an impregnated plywood for pre-fabricated

housing units, boats, airplane or motor car assemblies, cabinets, etc.

The company states that on standard tensile testing machines it was found that Reanite develops a bond—metal to metal—ranging from 1000 lbs. per sq. in. to as high as 3000 lbs. per sq. in. Bond developed between rubber and metal runs from 900 lbs. to as high as 1500 lbs. per sq. in.

It is reported, in tests made with 18 gauge photo-engraved plates, the bond formed by Reanite proved entirely unaffected by the suctional force exerted by the form rollers in high-speed letterpress operation. Similar tests are large area zinc plates proved equally satisfactory. Rubber plates may be fastened to wood or to metal for patent base use.

Present formulations of Reanite require a heat cure and mild pressure to secure maximum bonding. U. S. Stoneware reports its laboratories are working to perfect an air cure Reanite with reasonable possibilities of early success.

At present, the surfaces to be joined are coated with Reanite adhesive and are permitted to dry. Drying time ranges from 15 min. to 1 hr.—longer drying times do no harm. Heat (equivalent to approx. 300 deg. F. under pressure sufficient to hold the surface in intimate contact) is then applied for about 15 min.

One gallon of Reanite will join about 200 sq. ft. of surface.

Payroll Tax Deductions in a Flash

REQUESTS by the thousands from industrial executives and payroll desks are pouring into the George S. May Company, Business Engineers, for that firm's new device, called the "Deduct-O-Graph", which automatically shows the proper payroll tax deduction for any employee when proper settings are made as to marital status, wage range and pay period, President George S. May, announced recently.

This greatly reduced illustration shows the Deduct-O-Graph, developed by Geo. S. May Co., tells you how much tax to deduct from employee's salary. Two operations —moving dial and lever indicate the amount. A request on your company letterhead will bring yours gratis. Address Geo. S. May Co., Business Engineers, May Bldg., 2600 N. Shore Ave., Chicago 45, Ill.

Mr. May stated his engineers had started work on the Deduct-O-Graph idea the moment deduction tables under the new pay-as-you-go tax law were available from the Treasury Department, and that the Treasury Department had been responsible for the first business requests for the device. Before making any general announcements regarding the Deduct-O-Graph, the device had been tested by payroll officials in comparison with use of the set of tables ordinarily furnished for figuring payroll deductions, and that Deduct-O-Graph use resulted in not only much greater speed but positive accuracy as against slow, laborious figuring and a high percentage of errors for the tabular method.

When asked regarding cost of the Deduct-O-Graph, Mr. May said, "You cannot buy one at any price but the George S. May Company is giving them without charge to any firm requesting them on a business letterhead. The original print order was for 250,000 units but requests already in sight will exhaust this first supply."

EXECUTIVE ¶s

S. R. Kallenbaugh has been appointed West Coast District Manager of the Steel and Tube Division, Timken Roller Bearing Co., Canton, Ohio, whose Western offices are at 1526 South Olive Street, Los Angeles, Calif. Kallenbaugh is a graduate of Mt. Union College, and has had post-graduate training in Metallurgy at Ohio State University. Until his recent transfer, he was metallurgical service representative for The Timken Roller Bearing Co. in Cleveland and Detroit.

S. R. Kallenbaugh is Timken's new West Coast District Manager.

The Fuchs & Lang Mfg. Co., Div. of GPI, recently honored Paul H. Kolterjahn, one of its representatives, at a dinner commemorating the 25th anniversary of his association with the organization. The affair was held at Hotel Pennsylvania on July 2 and was attended by all F&L executives as well as associates of Mr. Kolterjahn. After making a special presentation to Mr. Kolterjahn, Gen. Mgr. R. J. Butler also paid tribute to the following, whose years of service with Fuchs & Lang, along with Mr. Kolterjahn's, total in aggregate over a century: Fred Lidington, Manager Philadelphia Office; M. Whitman, District Manager of New York; Jack Young, Metropolitan Manager and Fred Dankert, who was appointed Technical Service Manager at this meeting.

Eugene H. Davis has been appointed manager of the Philadelphia branch of International Printing Ink to succeed the late John H. King. He is well known to members of the graphic arts industry in that vicinity. Mr. Davis is 38. Married and the father of two daughters. Associated with Mr. Davis in the sales personnel are Messrs. Edwin B. Perry, Ray Trudgeon, Earle T. Hampshire, and Harry R. Saam.

Eugene H. Davis is new manager of IPI's Philadelphia Branch.

Many Craftsmen and their wives were breakfast guests of American Type Founders at the recent Craftsmen's convention held in Memphis, Tenn. Invitations were extended so that any morning could be chosen in which to accept ATF's hospitality. Invitations were placed in Craftsmen's letterboxes by Manager E. A. Fowler of the Atlanta office; Manager E. A. Tracy of the St. Louis office, and Fred A. Hacker, ATF offset sales manager.

John M. Masterson is now executive assistant to President Oscar C. Roesen of Wood Newspaper Machinery Corporation.

Oscar C. Roesen, president of the Wood Newspaper Machinery Corporation, announced recently the appointment of John M. Masterson as executive assistant to the president. Mr. Masterson is well known in the newspaper and publishing fields both here and abroad, having been previously associated with R. Hoe & Co., Inc.; George H. Morrill Co. and J. M. Huber, Inc.

A. J. Pingarron, formerly with IPI Research Laboratories and for the past several years an assistant superintendent at the Brooklyn Factory under Hejnar Johnson, is being transferred from the Brooklyn Factory to the Philadelphia branch where he will be in charge of the technical services in that area.

Stereotype Superintendent Bob Longmore of the Chicago *Tribune* in July celebrated the completion of 45 years employment at the *Tribune*. For 41 years of those years, he has been superintendent of the department. According to *The Trib* (the *Tribune's* pertinent house organ) Bob is quoted as saying: "Stereotyping methods have changed considerably since 1898. We used to carry a ladle of hot metal from the melting pot to the casting box, and we could make only two plates in three minutes. Now, with automatic casting boxes and other modern equipment, we turn out four plates per minute."

George Hahn, general superintendent of the Hibberd Printing Co., South Bend, Ind., retired as of August 1. He has been associated with the company for 43 years. Carl Hibberd, Jr., has been elected secretary of the company.

Forty-six years old, German World War I veteran Martin Fleischmann stood quietly in the background on July 28 watching a huge press forging red-hot steel ingots into the proper shape at The Timken Roller Bearing Company's plant in Canton, Ohio. The steel looked like any other chunk of steel but it is giving German military strategists, their air force fliers, and anti-aircraft gunners a headache. For a few pounds of it used in a vital part of turbo-supercharger enable our bombers and fighters to fly at altitudes above the effective range of anti-aircraft fire.

Fleischmann entered the University of Munich after World War I to study mechanical engineering. Metallography was a relatively new science then and it fascinated Fleishmann. After graduation he remained at the University as Assistant Professor of Metallography.

He arrived in New York, N. Y., in 1924 without friends to help him become established and with only $50 in his pocket.

From Pittsburgh he came to Canton in 1928 to take charge of the Metallographic Laboratory of the Timken Company.

Three years ago American aircraft engineers realized that if a special, tough, heat-resistant steel for a vital part

Martin Fleischmann, German aviator in World War I, is the inventor of a new special steel which enables United Nations airplanes to fly above effective anti-aircraft fire.

of the turbo-supercharger could be developed, it would add thousands of feet to American aircraft ceilings. Fleischmann went to work to provide the necessary steel.

He was so successful that American airplanes now fly above effective anti-aircraft fire. The altitudes they can reach are so great that German fighter planes cannot rise above American planes.

At a recent meeting of the Management Committee of the United Typothetae of America, Harold W. Hill of Cleveland was appointed to the committee replacing Elmer Pusey, who resigned on account of poor health. Mr. Hill graduated from Brantford (Ont.) Collegiate Institute, and took post graduate work at Cleveland's Fenn College. He was associated for several years with Sherman-Williams Company, the Caxton Company and Exline Company, all in Cleveland before founding the H. W. Hill Printing Company in 1919. He is president of that company. He is serving a third term as president of the Cleveland Typothetae Association.

K. B. Jacquith, manager of materials and planning for Duplex Printing Press Co., Battle Creek, Mich., is now a Lieutenant, j/g, in the U. S. Navy. He is sta-

Lieut. K. B. Jacquith, United States Navy.

tioned in Chicago, at the Board of Trade Bldg., as an inspector in the Office of Naval Procurement. Jacquith is 37 years of age and is married. At one time he was one of the country's youngest newspaper publishers. He published the Dunkirk (O.) *Weekly* for about 6½ years. Six years ago he disposed of the plant and joined Duplex.

P. S. Jones has been appointed general sales manager for Cutler-Hammer, Inc., of Milwaukee, Wis. In his new duties, Mr. Jones will have supervision of sales for the company throughout the country. He started his association with the company in 1915 as a sales engineer. He was transferred to the Pittsburgh office in 1919 and later was appointed Pittsburgh branch manager. For fourteen years prior to his new appointment he was in charge

New General Sales Manager for Cutler-Hammer, Inc., is P. S. Jones.

of New York sales territory. Mr. Jones is a graduate of Ohio State University where he obtained his BEE degree in 1915.

Advertisers' Postal District Directory

For the convenience of production and mechanical executive readers, we are publishing a directory of *Printing Equipment Engineer* advertisers. In the addresses are included the postal district numbers recently inaugurated by the U. S. Postoffice Department. Preserve this directory for reference so that when you correspond with any of the companies listed you can determine the postal district number with minimum effort.

Please give your zone number when writing advertisers.

Abrams, The M. L. Co., 1639 Superior Ave., Cleveland **14**, Ohio.
Acme Press Blanket Co., 160 North Wells St., Chicago **6**, Ill.
American Publishers Supply, 17 Stewart St., Lynn, Mass. (No Zone.)
American Roller Co., 1342 North Halsted St., Chicago **22**, Ill.
American Steel Chase Co., 31-31 Forty-Eighth Ave., Long Island City **1**, N. Y.
American Type Founders, 200 Elmora Ave., Elizabeth **3**, N. J.
Branches: 210 South St., Boston **11**, Mass.; 104 E. 25th St., New York **10**, N. Y.; 13th & Cherry Sts., Philadelphia **7**, Pa.; 109 S. Hanover St., Baltimore **1**, Md.; 327 Washington St., Buffalo **3**, N. Y.; 405 Penn Ave., Pittsburgh **22**, Pa.; 1710 E. 22nd St., Cleveland **14**, O.; 6th & Sycamore Sts., Cincinnati **2**, O.; 223 Nelson St., S.W., Atlanta **2**, Ga.; 519 W. Monroe St., Chicago **6**, Ill.; 180 E. Larned St., Detroit **26**, Mich.; 1224 'H' St., N.W., Washington **5**, D. C.; 2135 Pine St., St. Louis **3**, Mo.; 737 N. Van Buren, Milwaukee **2**, Wis.; 117 Washington Ave., N., Minneapolis **1**, Minn.; 934 Wyandotte St., Kansas City **6**, Mo.; 1927 Arapahoe St., Denver **2**, Colo.; 416 S. W. Oak St., Portland **4**, Ore.; 1261 Howard St., San Francisco **3**, Cal.; Western & Columbia, Seattle **4**, Wash.; 604 S. Akard St., Dallas **1**, Texas; 470 E. Third St., Los Angeles **13**, Cal.; 924 Grand Ave., Des Moines **9**, Iowa.
Anderson, C. F. & Co., 3225 Calumet Ave., Chicago **16**, Ill.
Atlantic Zinc Works, The, 210 Van Brunt St., Brooklyn **31**, N. Y.
Automatic Saw Sharpening Co., 735 East Ohio St., Indianapolis **2**, Ind.

Beveridge Paper Co., 705 West Washington St., Indianapolis , Ind.
Bingham's Sam'l, Son Mfg. Co., 636 Sherman St., Chicago **5**, Ill.
Black Rock Mfg. Co.. The, 177 Osborne St., Bridgeport **5**, Conn.
Blatchford, E. W. Co., 63 Park Row, New York **7**, N. Y.
Booth, The E. A. Rubber Co., 364 Rockefeller Bldg., Cleveland **13**, Ohio.
Brandtjen & Kluge, Inc., Gaultier & Como Sts., St. Paul , Minn.
Breuer Electric Mfg. Co., 5100 North Ravenswood Ave., Chicago **40**, Ill.
Burgess Cellulose Co., Freeport, Ill. (No Zone.)

Certified Dry Mat Corp., 9 Rockefeller Plaza, New York **20**, N. Y.
Challenge Machinery Co., Fulton Ave. & Beech Tree, Grand Haven, Mich. (No Zone.)
Champlain Corp., 636 Eleventh Ave., New York **19**, N. Y.
Chandler & Price Co., The, 6000 Carnegie Ave., Cleveland **3**, Ohio.
Cline Electric Mfg. Co., 211 West Wacker Drive, Chicago **6**, Ill.
Cottrell, C. B. & Sons Co., 25 East 26th St., New York **10**, N. Y.
Craftsman Line-Up Table Corp., 49-59 River St., Waltham **54**, Mass.
Cromwell Paper Co., 4801 Whipple St., Chicago **32**, Ill.
Cushman Electric Co., Concord, N. H. (No Zone.)

Dexter Folder Co., Pearl River, N. Y. (No Zone.)
Douthitt Corp., The, 650 West Baltimore St., Detroit **2**, Mich.
Duplex Printing Press Co., The, Battle Creek, Mich. (No Zone.)

Eagle Printing Ink Co. (Div. of General Printing Ink Corp.), 100 Sixth Ave., New York **13**, N. Y.
Eastern Newspaper Supply, 9603 Northern Blvd., Corona, N. Y. (No Zone.)
Edes Mfg. Co., The, Plymouth, Mass. (No Zone.)

Federated Metals Div., American Smelting & Refining Co., 2230 Indianapolis Blvd., Whiting **5**, Ind.
Flint, Howard, Ink Co., 2546 Clark Ave., Detroit **9**, Mich. Branches: Jefferson Davis Pkwy. & I.C.R.R., New Orleans, **19**, La.; 2807 Blake St., Denver **5**, Colo.; 2001 Calumet Ave., Chicago **16**, Ill.; Greeley General Warehouse Co., Broadway & E. 15th St., Cleveland **15**, O.; 38 Shelby St., Indianapolis **7**, Ind.; 95 Milton Ave., S.E., Atlanta, Ga.
Force, Wm. A. & Co., Inc., 216 Nichols Ave., Brooklyn **8**, N. Y. Branches: 180 North Wacker Dr., Chicago, Ill.; 684 Mission St., San Francisco **5**, Cal.

Gardiner Metal Co., 4820 South Campbell Ave., Chicago **32**, Ill.
General Electric Co., 1 River Road, Schenectady **5**, N. Y.
Goodyear Tire & Rubber Co., The, 1144 E. Market St., Akron **16**, Ohio.
Goss Printing Press Co., The, 1535 S. Paulina St., Chicago **8**, Ill. Branches: 220 East 42nd St., New York **17**, N. Y.; 74 New Montgomery St., San Francisco **5**, Cal.

Hamilton Mfg. Co., 1315-18th St., Two Rivers, Wis. (No Zone.)
Hammond Machinery Builders, Inc., 1600 Douglas Ave., Kalamazoo **54F**, Mich.
Harris-Seybold-Potter Co., 4510 East 71st St., Cleveland **5**, Ohio.
Herrick, William C., Ink Co., Inc., Maple St. & Erie R. R., East Rutherford, N. J. (No Zone.) Branches: 1230 W. Jackson Blvd., Chicago **7**, Ill.; 2917 S. Second St., St. Louis **18** Mo.; 80 Federal St., Boston **10**, Mass.
Hess & Barker, 212 South Darien St., Philadelphia **7**, Pa.
Hoe, R. & Co., 910 East 138th St., New York **54**, N. Y.
Huber, J. M., Inc., 460 West 34th St., New York **1**, N. Y. Branches: 1230 W. Jackson Blvd., Chicago **7**, Ill.; 2917 S. Second St., St. Louis **18**, Mo.; 80 Federal St., Boston **10**, Mass.
Huebner Laboratories, 305 East 46th St., New York **17**, N. Y.

Ideal Roller & Mfg. Co., 2512 West 24th St., Chicago **8**, Ill.
Branches: 626 Broadway, Cincinnati **2**, O.; 21-24 Thirty-ninth Ave., Long Island City **1**, N. Y.; 104 E. Mason St., Milwaukee **2**, Wis.; 232 W. Washington Square, Philadelphia **6**, Pa.; 821 Market St., Pacific Bldg., San Francisco **2**, Cal.; Room 531 Bond Bldg., 14th St. and N. Y. Ave., N.W., Washington **5**, D.C.; 222 West Larned St., Detroit **26**, Mich.
Imperial Type Metal Co., 1800 South 54th Ave., Chicago **50**, Ill.
International Printing Ink Corp., Empire State Bldg., New York **1**, N. Y.
Intertype Corporation, 360 Furman St., Brooklyn **2**, N. Y.

Johnstone Electric Co., Inc., 522 South Clinton St., Chicago **7**, Ill.
Justrite Mfg. Co., 2094 No. Southport Ave., Chicago **14**, Ill.

Kelly, E. J. Co., 1807-19 North Pitcher St., Kalamazoo **13F**, Mich.
Kimble Electric Co., 2011 West Hastings St., Chicago **8**, Ill.

Lake Erie Engineering Corp., Box 568, Kenmore Station, Buffalo **17**, N. Y.
Lanston Monotype Machine Co., 24th at Locust St., Philadelphia **3**, Pa.
Levey, Frederick H. Co., Inc., 1223 Washington Ave., Philadelphia , Pa.
Linotype Parts Co., Weatherly, Pa. (No Zone.)
Ludlow Typograph Co., 2032 Clybourn Ave., Chicago **14**, Ill.

Matrix Contrast Corp., 2812 Empire State Bldg., New York **1**, N. Y.
Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn **5**, N. Y. Branches: 500 Fifth Ave., New York **18**. N. Y.; 531 Plymouth Court, Chicago **5**, Ill.; 638 Sacramento St., San Francisco **11**, Cal.; 549 Baronne St., New Orleans **9**, La.; Mr. Arthur H. Cooke, 10 State St., Boston **9**, Mass.; 1515 Georgia St., Los Angeles **15**, Cal.
Metals Refining Co., 1717 Summer St., Hammond, Ind. (No Zone.)
Miehle Printing Press & Mfg. Co., 14th St. & South Damen Ave., Chicago **8**, Ill.
Miller Printing Machinery Co., 1117 Reedsdale St., N. S. Pittsburgh **12**, Pa.
Milwaukee Saw Trimmer Corp., 612 East Clybourn St., Milwaukee **2**, Wis.
Mohr Line-Saw Co., 126 North Union Ave., Chicago **6**, Ill.
Monomelt Co., 1611 Polk St., N.E., Minneapolis **13**, Minn.
Morley Co., The, 865 Islington St., Portsmouth, N. H. (No Zone.)
Morrill, George H., Co. (Div. of General Printing Ink Corp.), 100 Sixth Ave., New York **13**, N. Y.

New England Newspaper Supply Co., 164 Fremont St., Worcester **1**, Mass.
Norma-Hoffman Bearings Corp., Stamford, Conn. (No Zone.)

Offen, B. & Co., 343 S. Dearborn St., Chicago **4**, Ill.

Pabich, W. R. Mfg. Co., 2855 N. Rockwell St., Chicago **18**, Ill.
Pitman, Harold M. Co., 51st Ave. & 33rd St., Chicago **50**, Ill.
Plastic Binding Corp., 732 Sherman St., Chicago **5**, Ill.
Printing Equipment Engineer, 1276 West Third St., Cleveland **13**, Ohio.
Printing Machinery Co., 436 Commercial Square, Cincinnati **2**, Ohio.

Rapid Roller Co., 2558 S. Federal St., Chicago **16**, Ill.
Reid, William Co., 2271 Clybourn Ave., Chicago **14**, Ill.
Richards, J. A., Co., 903 N. Pitcher St., Kalamazoo **13F**, Mich.
Riehl Galley Lock Co., Inc., 1312 Ontario St., Cleveland **13**, Ohio.
Robertson, R. R., 400 W. Madison St., Chicago **6**, Ill.
Rouse, H. B. & Co., 2214-2216 N. Wayne Ave., Chicago **14**, Ill.
Royle, John, & Sons, 10 Essex St., Paterson **3**, N. J.

Scott, Walter & Co., Inc., 525 South Ave., Plainfield, N. J. (No Zone.)
Seybold Division—Harris-Seybold-Potter Co., 832 Washington St., Dayton **F7**, Ohio.
Simonds Worden White Co., 1101 Negley Place, Dayton **7**, Ohio.
Sinclair and Valentine Co., 611 West 129th St., New York **27**, N. Y.
SKF Industries, Inc., Front St. & Erie Ave., Philadelphia **34**, Pa.
Sta-Hi Corp., 1020 Crocker St., Los Angeles **21**, Cal.
Standard Process Corp., 734 W. Lexington St., Chicago **7**, Ill.

Teletypesetter Corp., 1400 Wrightwood Ave., Chicago **14**, Ill.
Timken Roller Bearing Co., The, 1835 Deuber Ave., S.W., Canton **6**, Ohio.
Tingue, Brown and Co., 114-120 East 23rd St., New York **10**, N. Y.

United American Metals Corp., 200 Diamond St., Brooklyn **22**, N. Y. Affiliated Corporations, 200 Diamond St., Brooklyn **22**, N. Y.; 2246 W. Hubbard St., Chicago **12**, Ill.; 4101 Curtis Ave., Baltimore **26**, Md.; 785 Bryant St., San Francisco **7**, Cal.; 2448 E. 25th St., Los Angeles **11**, Cal.
Universal Mono-Tabular Corp., 418 N. St. Paul Ave., Dallas **1**, Texas

Vandercook & Sons, 900 N. Kilpatrick Ave., Chicago **51**, Ill.
Vulcan Proofing Co., 58th and First Ave., Brooklyn **20**, N. Y.

Wesel Mfg. Co., 411 Gilligan St., Scranton **1**, Pa.
Wetter Numbering Machine Co., Atlantic Ave. & Logan St., Brooklyn **8**, N. Y.
Wood Flong Corp., Hoosick Falls, N. Y. (No Zone.)
Wood Newspaper Machinery Corp., 501 Fifth Ave., New York **17**, N. Y.

Young Engineering Co., 2747 Janssen St., Chicago **14**, Ill.

Wyoming's Printing History

Just published by The Book Farm of Hattiesburg, Miss., is a new book entitled *Early Printing in Wyoming and the Black Hills* by Douglas C. McMurtrie.

Printed in limited edition, by the Southworth-Anthoensen Press, Portland, Maine. Bound in blue buckram. Copies may be obtained from The Book Farm at address above.

Moves to Empire State Bldg.

The administrative offices of several operating divisions of Interchemical Corporation, including International Printing Ink Div. and In-Tag Div., have been moved to the 16th floor of Empire State Bldg., New York 1, New York. The move was made August 1. Approximately 30,000 ft. of office space have been leased. For the past 13 years the offices have been located at 75 Varick St. with the manufacturing and service departments. The new location will house the administrative offices of Interchemical Corp., International Printing Ink Div., In-Tag Div., Ault & Wiborg Corp., and the Export Div. The new offices are closer to the main research laboratories in New York and to factories and branch offices of the operating divisions and subsidiaries in the New York metropolitan area.

New England Newspaper Mechanical Conference To Be Serious Affair

THE fifth annual conference of the New England Newspaper Mechanical Executives' Association will be held in Hotel Statler, Boston on Saturday and Sunday, October 16 and 17.

"This year in particular," states President Herbert T. Stanger, "the conference has been geared to the times. While the program consists largely of clinic sessions, the discussions will reflect the production difficulties under which newspaper executives are working and it is thought the answers to many serious problems will be forthcoming."

The conference has been stripped of everything except those features which

Production Manager Herbert T. Stanger of the *Christian Science Monitor*, Boston, is President of the New England Newspaper Mechanical Executives' Association.

will be of benefit to newspaper executives in their work.

A highlight of the conference will be the appearance of David B. Fell, Chief of the Machinery Section of WPB's Printing and Publishing Division at the Sunday evening meeting in the Statler Georgian room.

As is stated above, Sunday, October 17 has been set aside for the conduct of six technical clinics, starting at 9:30 o'clock in the morning. The clinics will run until lunch time. At 2 o'clock in the afternoon a corollary meeting will be held for the benefit of all mechanical executives present. This also might be called an interdepartmental meeting.

Officers of the Association are: President, Herbert T. Stanger, Production Manager, *Christian Science Monitor*, Boston; Vice President, Chester M. Spooner, Mechanical Superintendent, Pawtucket (R. I.) *Times*; Secretary-Treasurer, Walter C. Crighton, Composing Room Superintendent, New London (Conn.) *Day*.

The program is as follows:

Saturday, October 16

Registration — Mezzanine Floor — 4:30 to 9:30 and Sunday morning. Walter C. Crighton, Sec-Treas. in charge.

Get-To-Gether Party — Ball Room — 9:00 P.M. Committee: B. F. Garrity, H. T. Stanger, R. M. Fitzgerald.

Sunday, October 17

Departmental Clinics—
9:30 A.M. to 1:00 P.M.

Composing Room—Georgian Room—Albert Schirm, Chairman, Mech. Supt., Quincy (Mass.) *Patriot-Ledger*. Committee: William H. Porter, New Haven (Conn.) *Register*; John F. Coughlin, Holyoke (Mass.) *Transcript-Telegram*; Karl G. Engel, Pawtucket (R. I.) *Times*, and John H. Laing, Manchester (N. H.) *Union-Leader*.

Pressroom—Parlor A—Charles Noonan, Chairman, Pressroom Superintendent, Providence (R. I.) *Journal*. Committee: Daniel J. Coona, Pawtucket (R. I.) *Times*, and John Bulman, Worcester (Mass.) *Telegram*.

Tubular—Parlor B—George H. Harris, Chairman, Foreman Press and Stereo Depts., Nashua (N. H.) *Telegraph*. Committee: John V. Gormley, Greenfield (Mass.) *Recorder-Gazette*, and Warren Storer, Waltham (Mass.) *News-Tribune*.

Stereotype—Parlor C—Thomas J. Enright, Chairman, Stereotype Foreman, Manchester (N. H.) *Union-Leader*. Committee: George Beaulieu, Lawrence (Mass.) *Eagle-Tribune*.

Machinists—Parlor D—Raymond D. Love, Chairman, Mech. Supt., Norwich (Conn.) *Bulletin*. Committee: Louis Lovette, Worcester (Mass.) *Telegram*, and Ivan Tetreault, New London (Conn.) *Day*.

Photo-Engraving — Hancock Room — Wm. H. Tourtelotte, Chairman, Supt. Engraving, Webster (Mass.) *Times*. Committee: Homer Goodwin, Worcester (Mass.) *Telegram*.

Recess for lunch, 1:00 to 2:00 P.M.

General Session—2:00 P.M.—Georgian Room — Co-Chairmen — Richard M. Fitzgerald, Worcester (Mass.) *Telegram-Gazette* and Russell A. Costello, Lewiston (Me.) *Sun-Journal*.

Discussions on question relating to more than one department or of interest to the mechanical interests of newspapers will take place at this session.

Banquet—6 P.M.—Georgian Room, President Herbert T. Stanger, Presiding; Introduction of guests; Address by David B. Fell, Chief of the Machinery Section, Printing and Publishing Division, War Production Board; Election of Officers and other business matters.

Printing Education in the War Period

IN his eighth annual report as Educational Director of the National Graphic Arts Education Association, Fred J. Hartman discusses "Graphic Arts Education in the Second Year of the War." He presents a 10 point summary of Graphic Arts educational achievements over the past 31-year period. In highlight form, he also gives the educational highlights for the years 1942-43. Among these are regional conferences, essay and typographical contests, promoting friendly relations with Latin America, working with U. S. Education Office, and war-time drives by printing schools in the sale of bonds and stamps. Mr. Hartman reports progress in the preparation of basic courses of study in printing for junior and senior high school and in vocational schools. A typical course is in readiness to be passed on to meet the needs of wartime instruction.

Educational publications have been maintained to keep Graphic Arts education before educational authorities, teachers and industry leaders.

With respect to the greater backing by industry for graphic arts educational financial support, Mr. Hartman discusses the situation as it has existed during the past few years. He states that printing is one of the few pioneer industries in industrial education that still retains something better than a mere semblance of cooperation with organized education. The industry has contributed almost 85% of the money that has enabled the National Graphic Arts Education association to bridge the depression years and the more stormy torrents of the war-time era.

The entire report is an impressive exposition of the objective and accomplished program of the association. "The education front," writes Mr. Hartman, "stands intact with strong leaders, loyal membership and a far-reaching influence in education generally." He points out specifically, however, that a larger backing of industry will give the needed impact to keep Graphic Arts education on the front line of education in serving the industry today and tomorrow.

To Conduct Inclusive Graphic Arts Survey

A nation-wide survey of current conditions and future prospects in Graphic Arts fields has been undertaken by Mergenthaler Linotype Company in the formation of post-war plans. The company has retained Dun and Bradstreet as research agency to hold personal interviews. In announcing this undertaking, Joseph T. Mackey, Linotype president, said: "Newspaper executives will be asked for their judgment on general business conditions, their estimate of post-war possibilities, and particularly for their appraisal of the needs and problems of the publishers."

Foreman Joe Bloe *has a hectic day at the plant — Between an electric clock and Gorie Daub Messe, Joe's cup of woe runs over — He makes progress with his Note Book*

By WILLIAM WYATT WARFEL

THUS FAR

The Daub Publishing Co. is having growing pains, business volume and production having increased gradually over the years.

SCHMEAR N. DAUB is president and general manager of the company which he operates on a strictly one-man basis. He is more and more annoyed by petty detail matters brought to him by

JOE ("Fluttergut") BLOE. Joe's responsibilities have been increased from time to time without corresponding authority and without increase in pay.

OSCAR GRAPHCHART (a distant relative of Publisher Daub's wife) has just recently graduated from a statistical school. He makes an impression upon Daub with his book-learning. Joe is smart enough to realize he must not antagonize Daub, so he resolves to learn all about the making of charts to show Daub the actual and inequitable methods prevalent in the production departments. Joe starts making a notebook for guidance in attempting to cure those conditions which prevent him from administering production affairs properly.

MOM is Joe Bloe's wife. Like many another wife, she diplomatically works on Joe to help him along with his job.

ERNIE is the philosophic bartender in a nearby saloon, who sagely hands out advice (in rough fashion) to his customers on matters related to the human element angle.

In Part IV., (August issue) Joe doesn't make headway in his relations with Daub. He receives Oscar Graphchart's statistical school note book—studies it and makes progress in the art of making charts. After studying the note book, he adds a page of chart doodles to his notebook. Through Oscar's academic influence, Joe sincerely tries to find a way to correct his difficulties.

In this issue of **Printing Equipment Engineer** it seems that Joe's plant troubles multiply and pile up unjustly.

V.

THE phone was ringing commandingly as Joe stepped into his office fifteen minutes late on Tuesday morning. He grabbed the receiver. Jocularly, he said, "Are you there?"

The voice at the other end grated out, "Yes, I'm here. Where have you been? We print a paper today." Then the voice changed to a sweetly sarcastic tone: "If you are not too busy, I would like to see you now."

Joe knew that tone well. It indicated that the Old Man had ants in his pants. Maybe his Old Lady had been reading the riot act or the Laws of War at Breakfast, or she may have smashed up the Old Man's car again. Usually, the Old Man was as slow as New Orleans molasses, particularly so if Joe wanted something done. At other times he moved like greased lightning. This moment was evidently one of those electric times. Joe didn't wait for the elevator. He skipped up the stairs three steps at a time.

Joe looked like a giant lipstick on the loose. It was Gorie's fault. Gorie Daub Messe, the head red ink grinder, became color blind when drunk and green ink was flowing from the red ink mill. Joe and his assistants pitched in and had just gotten the red ink flowing again when Daub peremptorily ordered Joe to come in his office. The emergency was so great Joe didn't take time to change his clothes. He was smeared from head to foot. Red ink soaked his shoes and colored his hair. He went right into Daub's private office.

Breathlessly he rushed onto the oriental rug in the big office.

The Old Man was reading some papers and didn't glance up. He looked like he had not digested Monday's lunch. Squirming around as he read the papers in front of him, he grunted. Joe knew a hot session was ahead.

Chills went up and down Joe's spine. Suddenly he felt tired and wished for a place to sit down, but no invitation was issued. After ten minutes of stalling, the Old Man threw the papers in a drawer and kicked it shut. He gave Joe a look that upset his stomach. The bacon climbed right on top of the eggs, and the grapefruit dropped burning acid among his innards as regularly and relentlessly as a leaking faucet.

"I tried to find you yesterday at five o'clock. Are you in the habit of going

Before Daub came down to the office on Tuesday morning, maybe the Old Lady had been reading the riot act to him, or the Laws of War at Breakfast. When Joe entered Daub's office, the Old Man looked like he had not digested Monday's lunch.

home at noon?" grated the Old Man. His expression was sour, like he had accidentally swallowed a spoonful of horseradish thinking it was sugar.

"I was right here, Boss. I didn't leave until five-thirty," said Joe placatingly as he automatically looked at the Old Man's clock. Darn if the clock didn't read two minutes to five. Evidently it had stopped the evening before. Joe grinned widely as he called attention to this fact and stepped over to wind and set the ancient timepiece. The Old Man looked startled for a moment. Yet he soon regained his poise. He forgot the reason for the hurry-up call for Joe.

"Is this a sample of the way you look after things around here? If the clocks around here stop and start any old time maybe that's the reason we never get the paper out on time," griped the Old Man, as he gave Joe a withering look.

"Look, Boss," said Joe pleadingly, "This clock should be in a museum. Last year we spent twelve dollars getting it fixed. The spring is busted again. For that dough we could get one of those new-fangled electric chronometers."

"It's your job to take care of those things. Why don't you do it?" yelled the Old Man with what seemed to be determination to put Joe in his place.

"Now, Boss," cried Joe anxious to clear himself of negligence, "I did get you one last month. Last week I saw it on Miss Lil Toots's desk. I ain't been laying down on the job. Miss Lil Toots said you told her she could have it."

In desperation, Joe went over to John Donkey's ornate office and lifted the electric clock from Miss Lil Toots' desk. The clock had been a gift from Joe a month previously. Daub gave it to Miss Toots, who is Mrs. Daub's niece. More trouble for Joe. As he returned with the clock, Daub was placing the receiver back on the phone. Miss Toots had phoned to Mrs. Daub, who in turn called up the Old Man. Daub shouted: "Take that thing back to Miss Toots and apologize."

"Then why didn't you get me another?" grunted the Old Man, as he refused to consider Joe's explanation. "That's an alibi. Don't you think I ought to know what time it is? Now get out of here and see that you find me one damn quick."

The wholesale houses gave Joe a quick brush-off. None of the paper's advertisers had one in stock. An electric clock was not to be had at any price. No one would even promise later delivery. Clocks were definitely off the market in Tincup. And the Old Man wanted to tell the time right now. In desperation, Joe went over to John Donkey's ornate office and lifted the clock from Miss Lil Toots's desk.

By the time Joe returned to the publisher's sanctum, more hot water had dripped into the stew. He slammed down the phone receiver just as Joe walked in. Waving his arms, the Old Man shouted: "What the hell do you mean by snitching my niece's clock? Take it back. My wife just called me about it. Take that thing back and apologize. I said, 'Get me a clock.' I didn't tell you to steal one. Now, get me one."

Joe retraced his steps sadly to return the clock. His spirits were at low ebb. It seemed impossible to satisfy the Old Man. Something always went wrong. Years ago, in a moment of rage, he had called Joe a numbskull. Later explanations as to actual facts had not cleared the original idea from his mind. It was just like Grampa frequently said: "Give a dog a bad name and he will never live it down."

As Joe rode down the elevator, he heard loud shouts coming up the shaft from the sub-basement. He hopped off the elevator and headed for the red ink grinding room on the double quick. Gorie Daub Messe, the head red ink grinder, was on a tear. All morning he had been bolstering a hangover with a quart of mountain dew. Hell was popping. When Gorie was tight, he was color blind. Green ink was flowing from the red ink mill. The pressroom foreman was shrieking for red ink. He needed gobs of red ink to finish a run.

Joe grabbed Gorie by the collar and the seat of his thoughts. It took only a moment to slide him into the wash room and lock the door. A couple janitors answered Joe's call. All pitched in to clean up the mess. Soon red ink was flowing from the mills. The emergency was so great that Joe had not bothered to change clothes. He was smeared from head to foot. Red ink soaked his shoes and colored his hair. As he looked in the mirror, it seemed he was a giant lipstick on the loose.

As Joe prepared to wash up, Hi Mercury drifted into the room. In a casual way he mumbled, "The Old Man is looking for you. Mad as the devil. Seems to be in a hurry. I been looking all over for you. Even went over to Ernie's place."

Hi was grinning as he finished his remarks. It was apparent that Hi was up to something. He was using this occasion to get even with Joe by leaving the impression with the Old Man that Joe was usually to be found at Ernie's place during working hours. This was Joe's reward for the time he caught Hi fixing the scales when Tipper Beam sold the wastepaper. Joe broke up that little graft and Hi vowed he'd get even. Joe thought of one of Grampa's cracks: "Tain't only the Lord that vowed vengeance," as he grabbed a phone.

As soon as the Old Man said "Hello", Joe started to explain why he could not come to the office at once. He got nowhere because the Old Man shut him right up in a snappy business-like tone: "I don't care what you are doing; come up here, right now. I don't mean an hour from now, either."

The elevator man chuckled and laid down a newspaper for Joe to stand on. When Joe arrived at the office, the Old Man's secretary tried to stop him. But Joe had his orders; he went right into the private office.

The Old Man, with his back to Joe, was talking to two distinguished-looking gentlemen, and was bragging about the outfit.

"It is a fact, gentlemen, that we have the best organized daily newspaper in this section of the country. Every one of our executives knows his job. We are so tidy that you could almost eat off our pressroom floor. We supply our people with freshly laundered clothes. That's one of the reasons our sheet looks so neat and clean. Our men take pride in the appearance of our plant. It is reflected in the finished product."

The raised eyebrows of one of the men stopped the Old Man. He turned around and surveyed Joe from head to foot. He was fast on his feet.

"You are in the wrong building, my good man," he said sweetly as he bounced out of his chair and beckoned to Joe. "*The Bugle* is printed two blocks down the street. Come with me a moment, and I will have someone give you directions."

By this time the Old Man had opened the door. Joe followed into the hall. His mouth was open but he could utter no words.

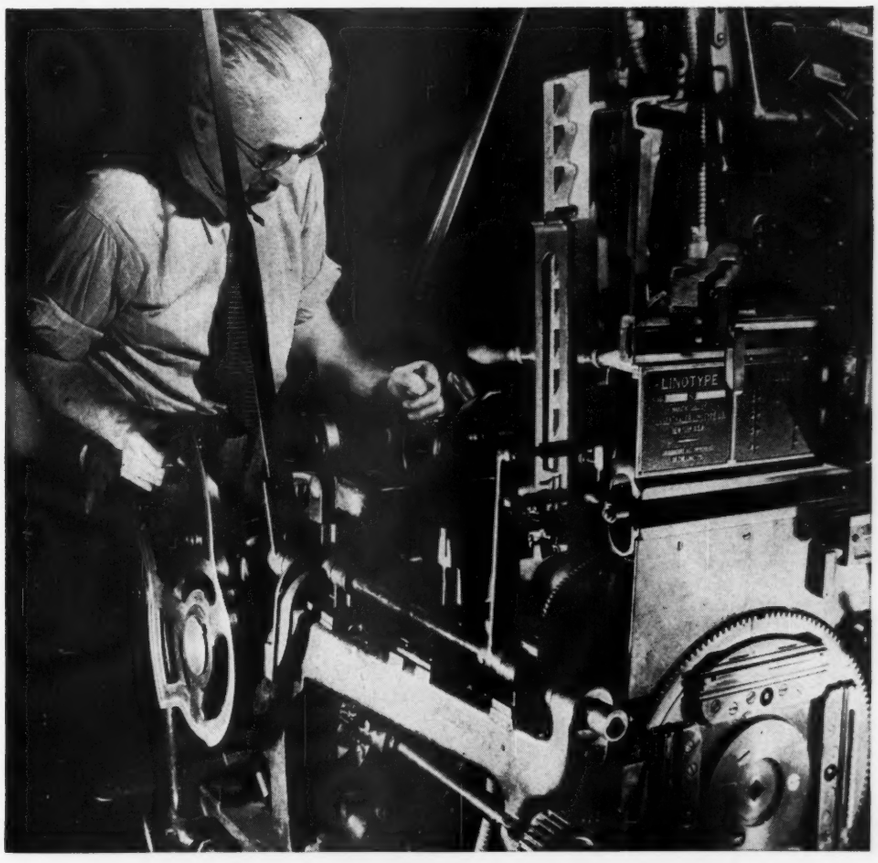
In the corridor, the Old Man surveyed the red candlestick again. His face became purple as he thought of the impression created by Joe on the two hotshot national advertising buyers. He soon regained control of himself and hissed: "I will see you later. We have soap in the washroom. Try it sometime." Then loudly he said: "That's right, two blocks up the street," as he hurried back into his office to throw a little more bull around.

Word had grapevined around the building, and a number of employees lined the hall. Some of the girls reached out to touch him. Bolder than the rest, one asked for a kiss. O. H. Yezzir barred the way to the elevator while Bullam Goode mounted a stool. His wise-cracking voice imitated an auctioneer.

"What am I bid, girls? What am I bid? The only walking lipstick in or out of captivity. Just think, one kiss will last a lifetime. What am I bid?"

Joe managed to get away, his thoughts

During his visit to Daub's office, word grapevined around the building about Joe's appearance. A number of employees lined the hall. As Joe left Daub's office, O. H. Yezzir barred the way to the elevator. Bullam Goode mounted a stool, his wise-cracking voice imitating an auctioneer: "What am I bid, girls? What am I bid? The only walking lipstick in or out of captivity. What am I bid?"



Your Production Watchman

When machines are down, your costs are up! Nobody knows this better than the men who are keeping the composing machines of the world running today. They know that the machines that are always ready for "takes" are those that have been constantly *kept ready.* Your guarantee of continuous production lies in the watchful care given every day by your maintenance men.

Set in Linotype Garamond Bold No. 3 series

★Wherever touring Linotype Mechanical Clinics are held, the Production Watchmen in plants everywhere are taking advantage of the opportunity to get first-hand technical information from our Linotype maintenance experts. *Watch for notices* of the Clinic to be held in your section.

bitter as gall. He was in dutch with the Old Man and everyone knew it. When things were going good, everyone was his friend. It reminded him of the old wheeze Grampa pulled: "In time of prosperity, friends will be plenty; in time of adversity, not one in twenty."

It was past lunch time when Joe had made himself presentable. To avoid further ribbing, Joe skipped lunch at the Press Executives Club and bought a sandwich and a cup of coffee at the Greek's around the corner. As he ate, the morning's events held his thoughts while he choked down the unpalatable food. He mumbled to himself: "Everytime something goes wrong, I am the one to fix it. The smart wise guys around here don't do anything, but somehow or other they always get the credit. I always catch hell. It ain't right. I guess it started that time twenty years ago when I carried John Donkey's paper route through four feet of snow. John got a soft office job, and I had to go to work taking papers off the fly. That's life, I quess. One guy works like a slave and ends up in the poorhouse. Another makes an art of dodging work—the community erects a monument to his memory."

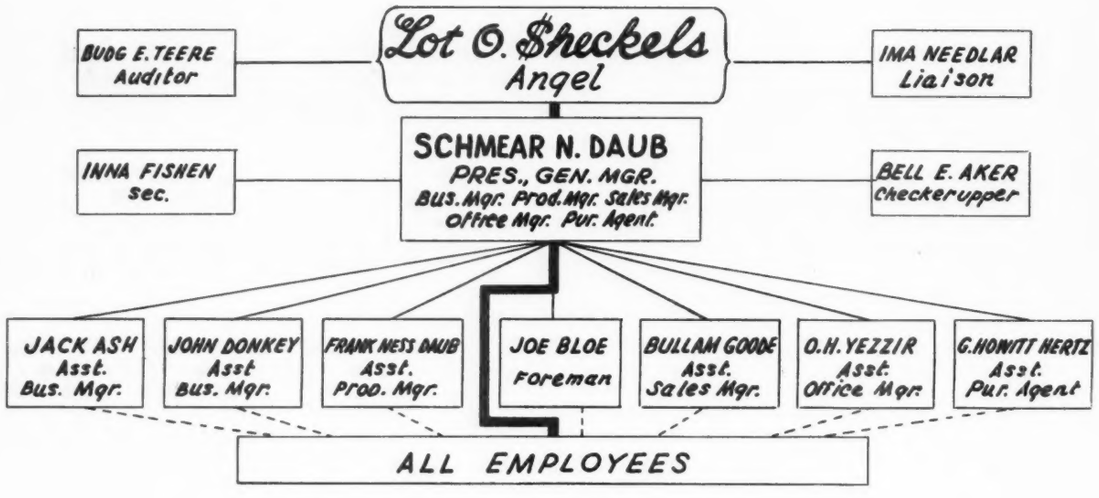
(To Be Continued)

Ever since Oscar Graphchart paid a visit to Publisher Daub, Joe has been thinking about expression of production records by means of graphs or charts. As a result of Oscar's visit, Joe has become organization conscious. It is dawning upon Joe that the Daub Publishing Co. organization setup isn't what it should be. In this Note Book Leaf, Joe analyzes the situation and the chart and notes printed below show the results of his pondering.

JOE BLOE'S NOTE BOOK—3

ORGANIZATION CHART OF AUTHORITY

Daub Publishing Co.



On page 1 of my notebook, Oscar is set down as stating: "The lines of authority must be clearly defined." Oscar meant this to describe the steps in management from the boss down. That's the way responsibility and authority are delegated to avoid mixups. In this way, everyone knows what his job is. This stops the wise guys from butting in and causing trouble.

The charts made by Oscar are simple. He calls them organization charts. His diagrams are just like an elevator—every stop down means a delegation of authority or responsibility, or both.

Around here in the Daub Pub. Co. we only have two people with authority—and we never see one of them—which makes Daub the whole cheese.

A chart of our organization from the standpoint of Oscar's chart-making methods would look funny. I'll make it. If I show it to Daub with one of the right kind it may do some good.

Oscar says that each box in an organization chart is like a desk. The solid line down from an upper box to the next box below shows where the responsibility and authority are supposed to go. On our chart, the solid line shows that the Boss has his fingers on everyone in the place.

As I understand it, employees on the same level of authority are always shown in a line horizontally in a chart. It seems to me that employees tied in on a horizontal line (like Needlar and Aker) have neither responsibility nor authority—they have simply nuisance value.

Actually, every minor employee in the outfit has eight bosses with responsibility—but only one with authority (the Boss himself). If I read English correctly, we bust every one of Oscar's seven commandments on page 1 of my note book. *The Boss needs Oscar's ideas more than I do.*

APPLICATION

Mfr. THE W. O. HICKOK MFG. CO.

Machine SR TYPE RULING MACHINE

Bearings SKF SELF-ALIGNING BALL

Locations PEN BEAMS AND CLOTH ROLLS

RULE 1: *use* SKF's

ON JOB RULING MACHINES

No preventive-of-jar to beam is necessary as this Type SR Job Ruling Machine rules up to 7000 sheets per hour regardless of the length of the sheet. SKF Self-aligning Ball Bearings support the back end of the pen beams which are often swiveled so that one end is farther advanced than the other, making it necessary to use a self-aligning ball bearing. SKF's are also used on the large cloth rolls which carry the paper through the machine. As a result, irregularities of the striking and pick-up on sheets are eliminated. There's no pen stagger at high speeds. And there's always full bearing capacity available for useful work. It's a rule—wherever bearings are responsible for smoothly turning parts—to use SKF Bearings, whether the machine prints paper for War ledgers or the headlines of United Nations' achievements with SKF-equipped weapons. 5378

SKF INDUSTRIES, INC., PHILADELPHIA, PENNA.

ARMY E NAVY

CRAFTSMEN

(Continued from Page 19)

a number of years, but after he had one installed he discovered its real value in helping to do precision work. He said he would not now be without one. He remarked: "After the war everything will be on a precision basis—so you might as well get in line installing precision dedevices now."

A question came before the meeting, in which it was asked how workups in the form could be prevented while a Miller Major high-speed press is being operated. The answer to this question came promptly. Experienced pressroom executives who are operating similar presses stated there is nothing wrong with the press. Any modern press needs a comparably modern chase and a good stoneman to lock up the form properly. One executive added to the discussion that what is needed is a new one-piece chase —square both inside and outside.

Mannie Hubbell, Planning Dept., Meredith Pub. Co., Des Moines, Iowa, discussed the new electrotyping process developed by Battelle Memorial Institute, Columbus, O.[3] The inside pages of the September issue of *Better Homes and Gardens* were printed in black and one color from plates made by the new process.

Herbert Libberton of Tenak Products, Inc., Chicago, traced development of electrotyping technique and described the advantages of molding forms in Tenaplate for electrotype reproduction. Tenaplate is superior to wax for molding purposes. With the development of silver spray for making Tenaplate molds receptive to copper deposition, the use of graphite for this purpose is eliminated entirely in the electrotype foundry.

Messina Discusses Advancements in Commercial Stereo Process

"I am surprised to learn there are men in this audience who think the stereotype plate-making process still is in the rock-crushing stage," was the statement with which Henry (Tony) Messina, technician with the Burgess Cellulose Co., greeted the clinic after he had been invited to speak by Co-Chairman Bradley. Mr. Messina traced development of improvements in stereotyping technique for commercial work within recent years. He said tremendous strides had been made. Thanks to the manufacturers of direct pressure machines, molding pressures can be controlled precisely. He enumerated other equipment improvements, among them vacuum casting boxes which provide all-over plane printing surface in the plates. He mentioned special metal alloys which have been developed for special types of work. All of the mat manufacturing companies have spent much time and large sums of money in developing mats especially suited for commercial work. For commercial work the process definitely is beyond the pioneering state.

In speaking of the operating technique, Mr. Messina said that molding pressures now compare favorably with other means of plate-making. Hills and valleys are eliminated in the plate by makeready which is done on the back of the mat or in the mold. In some instances, forms are molded upside down on plastic mats in the molding press to eliminate hills and valleys, this method providing a plane surface against which the form works in the molding operation. It is impossible to quote exact reproduction tolerances area-wise, but in general an idea may be conveyed by stating that these tolerances are within ½ pt. per running inch.

He described work which had been produced by the stereotype process employing the so-called plastic mats, in which 133 line screen halftones were used. The trade has accepted stereotype reproduction for many kinds of commercial work, including magazine printing, display advertisement reproduction, etc.

> The editor invites mechanical executives to pass on to *Printing Equipment Engineer* readers any ideas which have been devised in their plants for aiding production.

Flush-Mounting Thin-Gauge Halftones with Adhesive

Gradie Oakes of Process Color Plate Co., Chicago, described in detail, a new patented method for cementing thin-gauge, flush-mounted photo-engravings on wood. He anticipates marketing the process to photo-engravers. The cementing or bonding of the engraving to wood block is simple. The back of the engraving or a flat containing a number of engravings is coated with a plastic compound as is the top of the wood mounting block. The engraving is then laid on the block and both are put into a heated-platen hydraulic press to cure at 300 deg. F. for 3 min. During the curing time, Mr. Oakes said, the pressure causes the plastic compound to go down into the cherry or walnut wood grain "like little feet."

In the case of an 18 ga. flat, containing a number of engravings, the engravings are chopped apart in a guillotine cutter. By this method it is possible to do 200 halftones per hour. To saw the same flat apart, a little longer time would be required. The cuts are sawed flush all around. Important considerations in the use of these flush-mounted cuts are 27% saving in copper by reason of the elimination of flanges, and to the gripping qualities of the bond which eliminates "breathing" of cuts on the press, and in turn, the avoidance of slurs in the printed job.

Mr. Oakes stated that his firm has been doing all-around publication work for 20 concerns. Over 1500 cuts have been made for one firm alone, none of which have come off the base or moved while in the presses.

When queried about the possibility of cuts loosening from the base, he said that a temperature of 265 deg. F. is required to soften the bonding compound. This, of course, is greatly in excess of any temperature hazard in any plant. To remove a cut from its base, the cut may be placed face-down upon a steel plate covering a burning-in stove, until the wood base reaches the point where it will start to char from the heat.

Job Planning and Production Control

IT is one of the problems of Craftsmen convention program planners that sufficient time be allotted each clinic in which executive's mutual problems may be discussed. It is unfortunate that the Job Planning and Production Control Clinic scheduled for Thursday morning, August 12, had to be moved back until afternoon, so that two clinics were crowded into the time originally allotted to only one. However that may be, the co-chairmen of the Job Planning and Production Control clinic kept their program moving fast and finished the session in a little over one hour to permit convening the *Offset Platemaking and Printing Clinic*. The co-chairmen presented papers containing many valuable ideas to production and mechanical executives. In this respect, Messrs. Greenberger and Hubbell deferred courteously, but in a brief space of time they got their messages across for later "digestion" by printing executives.

This clinic was presided over by Co-Chairman Mannie G. Hubbell, Planning Dept., Meredith Pub. Co., Des Moines, and by Co-Chairman George Greenberger, Superintendent of the J. W. Clement Co., Buffalo, New York.

Mr. Greenberger described the need for job planning and production control in a plant, "whether it is large or small." He referred to its value in avoiding loss of time in production operations and its good effect in having all departments coordinate their activities according to plans made for the production of the jobs that go through the plant.

"During this war we must do our best to get results under the conditions we face and with materials that are available," said Mr. Greenberger. "With all of the forms we have to make out, and the redtape we have to unwind to meet government regulations, we as production men know that the customer still wants what he wants when he wants it. It is the work of the planning department to see to it that the customer gets his job, and gets it on time. Without careful planning and definite control of operations such results cannot be obtained with conditions as they are."

[3] See *Electrotyping Without Wax, Graphite or Impression Lead*, by R. M. Schaffert and Bruce W. Gonser, p.p. 42-50-52, August 1943 issue of *Printing Equipment Engineer*. Mr. Hubbell discusses the process in a separate supplemental article in this issue.

IMPRESSIONAL STRENGTH

It's not easy to look at a press and guess what its impressional strength is. If there is enough of it uniformly distributed to the limits of the printing area, the printed sheet tells its own story. Because the ATF Kelly press is built with *more than enough* impressional strength, the printer who owns one is always able to compete for the highest quality of work

We are inviting inquiries now for delivery of ATF Kelly presses after the war is won. Write or tell us the sizes of presses in which you will be interested.

ATF Kelly... THE PRESS OF TODAY AND TOMORROW

BUILT AND BACKED BY
american
TYPE FOUNDERS
200 ELMORA AVENUE
ELIZABETH, NEW JERSEY

He referred to the value of a production schedule which can be shown to the sales manager in cases where certain jobs are wanted by the sales manager in preference to others. He said that when a sales manager sees such a production schedule he will think twice before making a promise of delivery which will upset the schedule.

"All jobs should be planned and laid out on a control sheet, showing when each job is planned to go to press, the machine on which it is supposed to run and approximately how long it is going to take to run off the job," said Mr. Greenberger. "If all jobs are placed on such a schedule sheet and a production picture is available for the sales department the salesmen certainly will consult it before they accept orders and make delivery promises. As soon as they realize that when the schedule is rearranged, certain customers are going to be disappointed, the salesmen become cooperative in working in accordance with the schedule."

Control of Printing Elements

Precision methods in the composing room were described by Mr. Greenberger as follows:

"Some persons looking through our composing room might think we are supercritical about the kind of type we cast. We endeavor to hold our casting machines—Intertype, Monotype, and Ludlow—to a total tolerance of 0.001 in., that is, 0.0005 in. either below or above 0.918 in. All spacing material is shaved down to our adopted standard and when forms are made up with this material and sent to the foundry, we can place the proper height metal on top of the spacing material and fill in our foundry forms so that we may produce printing plates requiring little or no finishing in the foundry. In consequence of this precision work, little or no makeready is required in the pressroom."

Mr. Greenberger described the simplified operations of putting comparatively small jobs on rotary presses. He said that his firm accomplishes it by spending money for precision plates, "but where the ordinary makeready might take 12 hours, we have a job on and off the press within that time by the use of precision methods.

"Just think about a 5-color press running at a speed of a sheet a second, 3600 color impressions an hour, which at 5 colors an impression totals 18,000 one-color impressions an hour, or a total of 144,000 one-color impressions in an eight hour shift," said the speaker. "Compare this with printing one color at a time, at 1200 or 1400 impressions an hour and wondering what the final result is going to be as compared with looking at a full color finished product at the start of the job."

He referred to the need for testing all materials that go into a job before they go to the pressroom so as to avoid high costs of making corrections in the pressroom which should not be used as a testing laboratory.

"Simplicity is the essence of good production control," continued Mr. Greenberger. "Every unnecessary detail means more work, higher costs and a greater possibility for failure under stress and strain."

He also mentioned that it is the duty of the production department to see to it that records on jobs after completion are promptly sent to the office so that there will be no delay in billing them.

Planning at Meredith's

Additional information was given about job planning and production control by Co-Chairman Hubbell, who drew from the experiences of that organization to illustrate the operations of a workable system. He mentioned that a man comparable to an architect must be on the job in order to have things planned right in a printing plant. He said that jobs are classified in their plant in three groups, group 1, being jobs over $50,000; group 2, being jobs under that amount, and over $10,000; and group 3, being jobs under the $10,000 mark. In planning a job, all elements are considered, estimates are made, process of manufacture determined and materials are provided before the job is routed through the various departments. Following the completion of the job, all of the items are checked up and reported upon and whatever follow-up is necessary is done. If spoiled work occurs on the job it is reported upon, and every effort is made to avoid waste during the processing of the work.

Offset Platemaking and Printing

THE final technical clinic, *Offset Platemaking and Printing*, was held Thursday afternoon, Aug. 12, immediately following adjournment of the "condensed" *Job Planning and Production Control* clinic. The clinic was presided over by Co-Chairman Jack L. Hagen, superintendent of Workman Mfg. Co., Chicago, and Co-Chairman George Kearsley, Lithographic Specialist, of Edward Stern & Co., Inc., Philadelphia. Director of Research Wm. H. Wood, Harris-Seybold-Potter Co., Cleveland, and Research Director Chas. F. King of Lithographic Technical Foundation, were invited to the speakers' platform.

Deep Etch Conservation

Metal conservation through elimination of the graining operation on deep etch plates was described. Method is useful for short runs and the plate may be used six or eight times without regraining. The metal is first printed upon from a positive, developed down to the metal with calcium chloride, cleaned with alcohol, asphaltum and ink are applied but not lacquered; as many copies as are needed are printed; degrease with active grease solvent such as toluol, flush out, dry, apply chlorox, counter-etch, and the plate is ready for reuse without regraining. The image from the previous plate can be seen but won't print if it is free from grease.

Depth of Deep Etched Plates

In reply to the query: *Can deep-etched plates be etched too deep?* Mr. King said that in nine out of ten cases where trouble is experienced, either the plate is not dry or the lacquer doesn't "get down to" the bottom of the plate. So much is dependent upon how well the plate is cleaned out. He never saw a case of a properly sensitized plate that would not take ink. He stated the proper etching depth is 0.0002 in.—a deeper etch doesn't add anything to the printing qualities of the plate, and is desirable as a war economy measure.

Gelatine Plates Stand Up

Someone wanted to know how long a press run could be secured from a gelatine plate. Co-Chairman Kearsley stated that in the Stern plant as high as 70,000 impressions have been secured. The average run in that plant is 20,000 from a 38 x 50 plate. The Optak process is employed. Plates are coated in the plant. A 200-line screen is used mostly, but up to a 400-line screen is utilized in certain cases.

Would Bet on Million Impressions

Mr. Kearsley discussed the use of Monel metal plates in the Stern plant. These plates came from International Nickel and are now unobtainable. Nickel is alloyed into the metal composition. The speaker said they are very durable and if they are not stored, they will ultimately be cheaper than regular plates. The number of times each plate is used (and consequently the number of impressions) is kept track of by stamping a letter of the alphabet in sequence on each plate each time it is used. One of the Monel plates has been stamped twice alphabetically and partly over again (third time). In connection with the use of these plates oxidation troubles are minimized and less acidity in the dampening solution is required to keep the plates printing clean. Wm. H. Wood stated he would be willing to take a bet on a million impressions from each plate provided it was made properly by the deep etch process on monel.

The question was asked as to whether there was a substitute on the market for albumin for coating offset plates. Mr. Wood said there were several on the market. Mallinckrodt Chemical Co. reports egg albumin is hard to get. Harris-Seybold-Potter Co. has standardized on a soybean derivative for coating purposes.

High-Etch Plates

C. W. Dickinson, manager of the offset press division of R. Hoe & Co., was requested to discuss high-etch plates. These plates principally are used in the metal decorating field—one use being that of printing large quantities of Pepsi-Cola bottle caps. Further discussion brought out the information that dry

(*Continued on Page 36*)

Patent Report — *Skin-drying of inks claimed to be prevented on a press standing overnight by non-diluting compound sprayed on ink rollers and plates —Report covers patents issued July 20-27, and August 3-10-17*

Binding, Cutting, Perforating:

2,324,834. METHOD OF MAKING SIGNATURES to reduce the time required to complete mail-order catalogues printed by the rotogravure process, by making it possible to print signatures on a continuous narrow web of paper, one sheet at a time, on small "candy-bar wrapper" rotogravure machines found in many printing establishments. As the sheets are printed a thin line of non-tacky glue is applied at the side of the sheet and dried, except that no adhesive is applied to the end sheet. As the webs are printed they are reeled. Subsequently they are unwound, severed into sheets, and the individual sheets for many signatures are stacked with the lines of adhesive in superimposed registry. By appropriate treatment the adhesive, which may be an adhesive plasticized by heat or by a solvent, binds the sheets into signatures while the sheets are stacked. Cutting of folded edges is unnecessary as there are none; and the number of sheets is not limited to the conventional 8, 12, 16, or 32. The adhesive used to combine the signatures into the catalogue should be compatible with that used on the sheets. The method is adaptable for telephone books, etc. Invented by Irving Gurwick, Long Beach, N. Y. Unassigned. Application August 21, 1941. 7 claims.

2,325,030. POWER-DRIVEN HEAVY DUTY PAPER CUTTING MACHINE. The knife blade and paper clamp are driven from a member reciprocably mounted at the side of the cutter. Knife blade and mechanism cooperate so that no pressure is exerted against bearing surfaces which guide knife in its vertical movement whereby the blade remains square to the paper being cut. The mechanism which operates the paper clamp is provided with an improved slip drive which applies a relatively light pressure during compression of paper in stack to be cut, and heavy pressure subsequent to compression. An improved train for actuating blade and clamp is provided. Heavy driving mechanism is so located as to prevent injury. Invented by Oscar Bellar, Brooklyn, N. Y. Unassigned. Application September 26, 1941. 34 claims.

2,325,938. INDIVIDUAL COILED PLASTIC BINDING UNITS intended to be used in groups of two or more spaced along the binding edge of perforated pages for permanently fastening pages together into a perforated cover to make a booklet. Each unit consists of a short length of tubular resilient material having a straight section corresponding to the length between vertically adjacent perforations, and finished at both ends with oppositely pitched coaxial coils of two or more turns. The outward end of each coil is inserted through the perforation in the stack of book pages and the coils rotated until the connecting portion between them reaches a position against the face of the stack. Invented by Arthur F. Brook, Madison, N. J. Unassigned. Application November 7, 1942. 4 claims.

2,326,608. GUARD DEVICE FOR A PAPER CUTTING MACHINE which moves into and out of a position blocking access by the operator to the blade of the machine when the latter is in motion. A lock prevents the operator from actuating the blade-reciprocating mechanism when the guard is not in place and prevents removal of the guard during the cutting stroke. Invented by Louis Boraks, Brighton, Mass. Assigned to Liberty Mutual Insurance Co., Boston, Mass. Application January 14, 1942. 24 claims.

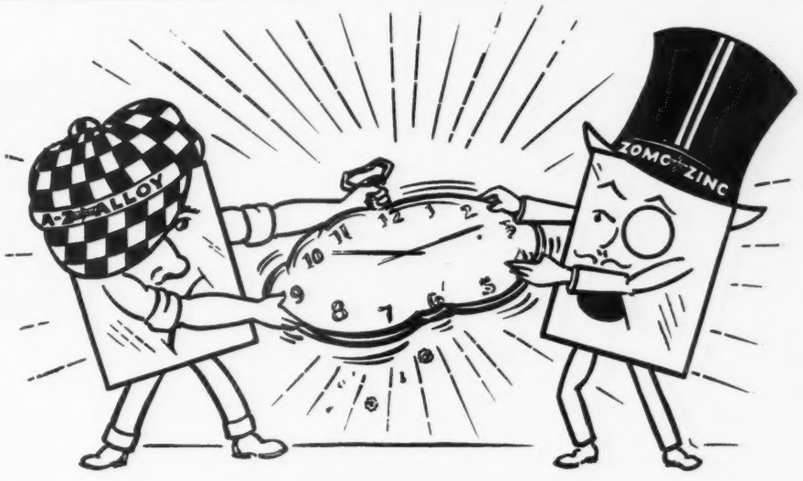
Composing Room Equipment:

2,325,666. ELECTRICALLY OPERATED DISTRIBUTOR SIGNAL FOR TYPOGRAPHICAL MACHINES of the slug casting and line composing type. The signal indicates to the operator that all of the matrices previously used in composing a line of cast type have been returned to their respective magazines. Signal may be visible or audible such as an electrical bell. A matrix distributor comprises a distributor box for receiving matrix lines, a matrix-receiving chute disposed above each magazine in electrically insulated relation with respect to its magazine. A distributor bar distributes matrices to their proper magazines. A member moves from a normal position to a position for advancing matrices from distributor box to distributor bar, and has a signal and controlling circuits. One of these circuits has a switch normally maintained in open position by advancing matrix, but adapted to close upon movement of member from normal position and during matrix advancing operation of member. Another circuit is connected with several chutes and is normally open, but is rendered closed by a matrix when in contact with magazine and its chute. Invented by Robert S. Czachorski, Grand Rapids, Mich. Unassigned. Application March 13, 1942. 2 claims.

Feeding, Folding, Delivery:

REISSUE 22,359 of 2,253,556. SIGNATURE HANDLING MACHINE which, under the supervision of one operator, is capable of handling six thousand signatures an hour in contrast to five or six thousand a day by a skilled manual worker. Machine has five adjacent mechanisms for automatically performing all operations. Signature Feed Station transfers signatures from stack to a moving conveyor. Signature Opener Station can be adjusted to displace any number of sheets from either or both sides of the folded signature to form one or more openings at preselected pages. Sheet Feed Station receives the advancing, opened signatures and inserts individual sheets, color forms, etc. Gauging Station calipers the stuffed signatures to check on the accuracy of the inserting, and separates incorrectly filled signatures. Signature Discharge Station receives the gauged signatures under the intermittent action of an auxiliary conveyor and raises correctly stuffed signatures from the support to discharge them separately from the inaccurately stuffed signatures. Invented by Martin Christensen, Milwaukee, Wis. Unassigned. Application for reissue August 24, 1942. 80 claims.

2,324,950. EDGE TRIMMER FOR USE IN FOLDING SECTION of rotary printing presses to provide smooth or clean-cut edges. In combination with rotary trimmers straight-edged knives are adjustably fitted in rotatable cylindrical carriers and corresponding anvils are carried by associated cylinders to effect a clean cut during rotation by mere wiping contact. Pads supporting the edges of the copy and covers between the knives are provided for preventing creasing of the printed matter during the trimming operation. Adjustable guide shoes and a chute are adapted to remove the trimmings by exhaustion. In-



How to stretch wartime hours . . .

With staffs depleted by war conditions, engravers are interested as never before in materials and methods which save time. Both Zomo Electric Zinc and A-Z Alloy enable engravers to save useless waste motions – get the most out of every wartime hour. Here's why:

1 The High quality and uniformity of Zomo Electric Zinc and A-Z Alloy save time by eliminating unnecessary make-overs.

2 These metals have the new Machine-Cut Finish. This finish requires no time-taking pumicing or rubbing. Just swab it with a solution of trisodium phosphate.

3 These metals can be supplied with Backote. This means an important saving on each plate putting on and taking off sticky asphaltum.

[*You can order both these metals, plain or Backoted, from leading metal suppliers in the United States and Canada.*]

ZOMO ELECTRIC ZINC ◆ A-Z ELECTRIC ALLOY

vented by William A. Pratt, Watford, England. Unassigned. Application February 28, 1942. 10 claims.

2,325,059. SHEET CARRIER with device for positioning sheets useful in delivering sheets from printing presses, etc., to keep sheets straight, and lying flat when operation is performed at high speed. The apparatus has a movable carrier against which the sheet is adapted to be positioned. The positioning device holds sheet in correct relation to carrier movable to and from operative position. A rotary member is adapted to roll upon movement of the carrier to move the positioner relatively to the carrier. Invented by Samuel A. Huffman, Avalon, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application April 28, 1941. 36 claims.

2,326,173. WEB-WINDING APPARATUS designed to be used in conjunction with a slitting, printing, or coating machine or the like, especially for web materials with a rather slippery surface such as non-fibrous cellulosic materials, e.g., Cellophane, or hard sized or coated paper and textiles. These materials are difficult to wind because air trapped between the overlying convolutions adds to the natural tendency for the convolutions to slip, one on the other, and causes rolls (especially of narrow width) to have telescoping instead of flush ends. Without considerably increasing the tension on the web, present invention achieves smooth-end rolls by driving the supply winding and both the surface of the take-up winding and the take-up winding form, the latter being driven slightly ahead to exert a relatively weak force on the winding. Invented by Arthur O. Russell, Fredericksburg, Va. Assigned to Sylvania Industrial Corp., Fredericksburg, Va. Application October 18, 1941. 10 claims.

2,326,680. WEB TENSIONING DEVICE in combination with web splicing means for joining the web of an expiring roll of paper with that of a new roll while the printing press is running at normal speed. The application for this patent was a division of the application for patent 2,272,225 (Printing Equipment Engineer, March 1942) wherein the novelty of the pasting device was featured. Present patent deals with applying tension to the running roll controlled by the diameter of the roll while employing a magazine roll, one controlling means being used to govern both rolls as each becomes the running roll. While the paper roll decreases in size the tension force is gradually reduced but only so that when the roll is at its smallest diameter, there still is enough tension to apply the braking strain to control the butt as it is being unwound. Invented by Charles L. Ricards, South Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Original application September 1, 1937. Divided and this application November 14, 1941. 7 claims.

Miscellaneous:

2,325,171. APPARATUS FOR MULTI-ROLLER PIGMENT MILLS which will reduce excessive evaporation of solvent and maintain constant and uniform composition of the mixture being milled. It permits efficient grinding and dispersion of aniline inks and similar dispersions in volatile solvents. The upper surfaces of at least two rollers must be at least partially enclosed, and the make-up solvent should be supplied in a continuous small supply, preferably near the end of rollers. The number of rollers supplied with make-up solvent depends on the ultimate product. Invented by Isidor M. Bernstein, Cincinnati, Ohio. Assigned to Interchemical Corp., New York, N. Y. Application August 3, 1940. 2 claims.

2,325,380. METHOD OF PREVENTING SKIN-DRYING, gelling, and oxidizing of inks and other coating pastes as well as varnishes and paints, to obviate the cleaning up of a machine between periods of operation. With the treatment described in the present patent it is said a press may be left overnight or for a comparable period without further attention. Eugenol or other known anti-skinning agent is mixed with castor oil or some other non-drying oil as a carrier and as an evaporation preventive agent. For example corn, olive, raw linseed, or similar oil, in the proportion of about six parts of the oil to about four parts of the agent, each amounting to at least about 10% of the composition, is sprayed as a light mist or brushed on the surfaces to be treated, such as ink rollers, the plates themselves (preferably by roller contact), varnishing machine rollers, etc. Only a fraction of 1% Eugenol, etc., in relation to the weight of the ink, need be used, whereas the use of the same agent admixed requires a proportion of as much as 5% or more. The new composition is non-diluting and when printing is resumed it is said that even the first sheets off the press are acceptable. Invented by Edward Edwards, Jr., Chicago, Ill. Unassigned. Application August 9, 1940. 4 claims.

2,326,111. INSTRUMENT FOR MEASURING INK, lacquer, paint and enamel, which may be regulated to the amount placed within a receptacle, and the scale of which indicates the contents. On the base supporting the container there is mounted a vertical standard in offset relation with respect to the container. A scale is supported on the standard and a light-containing housing is slidably supported on the standard forwardly and laterally of scale. A lock positions the light-housing on standard. A light in the housing extends into receptacle for contact with liquid and light rays flicker and spread over top of liquid when liquid contacts lower end of light transmitting element, thus indicating the desired level of liquid. Invented by Louis G. Zachos, Atlanta, Ga. Unassigned. Application March 20, 1941. 3 claims.

Plate Making:

2,325,071. IMPROVED METAL SURFACE for bearings, printing plates, type or like articles which must withstand wear, mechanical stress, and corrosive conditions. The surface layer is composed of finely divided lead indium particles consisting of lead and indium bonded together to form an integral surface layer adherent to supporting member. About 0.05% to 10% indium is used, the balance being lead particles. Invented by William S. Murray, Utica, N. Y. Assigned to Indium Corp. of America, a corporation of New York. Application November 30, 1940. 6 claims.

2,325,135. INTAGLIO PRINTING MEMBER for reproducing designs on textiles. Application for this patent was a division of that for patent 2,229,014 (Printing Equipment Engineer, February 1941) wherein the method of photomechanical production was featured. Present patent is on the member on which there is created a design in the form of a color carrying groove which defines the outline of the design, and a plurality of color carrying areas positioned within and spaced from the groove by a color retarding dam. Colors from adjacent impressions are said not to run together or flush if, in making the printing member, the distance is regulated by which the negative on the light sensitive member is initially reduced marginally. Invented by Owen R. Huggins, South Norwalk, Conn. Assigned to Linotone Corp., a corporation of New York. Original application March 3, 1938. Divided and this application August 9, 1940. 1 claim.

2,326,058. PHOTOGRAPHIC STRIPPING MATERIAL. A sensitized matte emulsion layer useful for making prints of line drawings is carried by a temporary support and transferred to a permanent support such as a lacquered metal plate. This is accomplished by the use of a dry-stripping layer of water-soluble hydrolyzed cellulose acetate having an acetyl content between 16% and 18%, especially purified to leave less than .5% salt. The acetate is dissolved in a out 5% concentration in water containing from 5% to 10% of butyl alcohol to prevent foaming. The use of water-soluble material avoids the use of more expensive solvents with their attendant possible hazards of toxicity and explosion and their tendency to attack or penetrate the temporary support, e.g., paper, on which the acetate coating layer is also more readily spread, the thickness of the stripping layer being approximately 8 grams per square meter of surface. Invented by Gale F. Nadeau, Rochester, N. Y. Assigned to Eastman Kodak Co., Rochester, N. Y. Application July 30, 1942. 3 claims.

Printing Inks and Related Chemicals:

2,324,550. IMPROVED PRINTING OR LITHOGRAPHIC INK particularly adapted for application to metal and similar non-absorbent surfaces to be dried at relatively high temperatures. The ink has increased solvent action so that in the printing step there is obtained a film of higher solids resulting in better color strength and opacity and which insures a printed surface more easily and quickly dried. Alkyl phosphates, preferably trialkyl phosphates, are used as quick drying solvents. The rapid drying of ink containing alkyl phosphates is due in part to narrow boiling range of temperatures. Invented by Herbert J. Wolfe, Maspeth, Long Island, N. Y. Assigned to American Can Co., New York, N. Y. Application March 8, 1939. 5 claims.

2,324,671. HEAT-SET ROTARY PRINTING INK in which the evaporation rate of the solvent is lowered so the press can be operated for extended periods of time without the ink becoming tacky. The ink is composed of a pigment dispersed in a vehicle comprising a resin and a volatile solvent and a solvent evaporation retardant of a wax such as paraffin and a substance selected from the group consisting of monohydric alcohols having from 8 to 30 carbon atoms each, dihydric alcohols having from 8 to 12 carbon atoms each, and higher hydroxylated fatty acids. Invented by Isidor M. Bernstein, Brooklyn, N. Y. Assigned to H. D. Roosen Co., Brooklyn, N. Y. Application November 29, 1941. 11 claims.

2,325,062. CONDENSATION PRODUCTS of alcohol amines and fatty acids which may be used in the manufacture of printing pastes. The acid reacting products are prepared by condensing alkylalamine and a carboxylic acid substance containing at least 6 carbon atoms, the product normally having an alkaline reaction. This product is heated with an organic compound, a halogeno acyl halide containing not more than 6 carbon atoms, to produce an acid reactive product. Invented by Wolf Kritchevsky, Chicago, Ill. Assigned by mesne assignments to Ninol Development Co., Chicago, Ill. Application August 12, 1939. 18 claims.

2,325,297. INKS ADAPTED TO BE PRINTED AT HIGH SPEED AND DRIED BY HEAT and which do not cause deleterious roller swelling and disintegration, and similar difficulties. The ink contains a petroleum solvent having a kauri-butanol value between 20 and 30 and is adapted to be used on rollers surfaced with resinous material. The solvent component is so limited in solvent power as to be below the solvent capacity of the particular roller used and which dries rapidly. In this way the roller is protected because it absorbs no ink. Invented by Floyd E. Barmeier, Chicago, Ill. Assigned to General Printing Ink Corp., New York, N. Y. Application August 1, 1940. 6 claims.

2,325,783. SEPARATION OF GLYCOL AND GLYCEROL useful in printing ink and ink rolls as well as in textile treating, medicine, leather manufacture, lubricant, paper treating, and lacquers. Glycerol, glycol, and other lower polyhydric alcohols are separated from higher polyhydric alcohols, e.g., pentitols and hexitols. The mixture of alcohols is brought into contact with a ketone which is a solvent for the 2-4 carbon atom alcohols but which has no solvency power for the alcohols of more than 4 carbon atoms. Liquids are agitated and separated. Invented by Eugene J. Lorand, Wilmington, Del. Assigned to Hercules Powder Co., Wilmington, Del. Application September 7, 1940. 6 claims.

2,325,986. THIXOTROPIC COMPOSITIONS USEFUL IN PRINTING INKS and also for coating compositions for wire, metal, textiles, and paper. They are readily produced from a blend of polymerized rubber with a melamineformaldehyde resin alkylated with an acrylic alcohol containing 3 to 8 carbon atoms, wherein the molal ratio of

TRADE CONVENTIONS

American Photo-Engravers Association—The 47th annual convention of the American Photo-Engravers Association will be held this year by mail. It is planned to arrange an inspirational and informative program providing for a symposium of prepared papers on important subjects. This material will be published in the November issue of the *Photo-engravers Bulletin*, according to Editor Louis Flader, A-1446, 166 W. Van Buren St., Chicago, Ill.

ANPA Mechanical Conference—As has already been announced, the 1943 Mechanical Conference is being conducted by mail. The Mechanical Committee plans to issue a series of six bulletins at intervals, each of which will deal with mechanical and production problems. The June issue of *Printing Equipment Engineer* was devoted to the manufacturer and supplier exhibits in lieu of the "live" equipment and supplies exhibits usually held at the annual conference. Walter E. Wines, ANPA Dept. Mgr., 370 Lexington Ave., New York, N. Y.

New England Newspaper Mechanical Conference—Will be held at Hotel Statler, Boston, Saturday and Sunday, October 16 and 17. President is Herbert Stanger, Production Manager, *Christian Science Monitor*, Boston, Mass.

International Association of Electrotypers and Stereotypers—Annual meeting will be held at Hotel Statler, Cleveland, on Wednesday and Thursday, September 22 and 23. Purpose of the meeting is to elect officers, present reports and transact business. No entertainment afforded. Meeting confined strictly to business at hand. Secretary, Al Schloegel, 949 Leader Bldg., Cleveland, Ohio.

United Typothetae of America—Annual convention has been dispensed with this year, but a joint meeting of the directors and membership will be held at Lincoln Hotel, Indianapolis, Ind., on November 3 and 4. New officers will be elected. Outstanding feature will be joint conference on the printing industry's part in post-war period.

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formaldehyde to melamine is at least about 4 to 1 and wherein the proportion of melamine resin is less than about 40% (total solids weight basis). The compositions have improved physical and chemical properties, e.g., sensitivity to solvents, reduction in thermoplasticity, hardness, heat-, acid-, alkali-, water-, abrasive-resistance, etc. The polymerized rubber is cyclized rubber obtained by reacting the rubber with amphoteric metal halides. Invented by Robert C. Swain, Riverside, and Pierrepont Adams, Stamford, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application October 26, 1940. 4 claims.

2,326,047. ANTHRAQUINONE DYE COMPOUND SUITABLE FOR DYEING, PRINTING, OR STENCILING organic derivatives of cellulose such as cellulose acetate, cellulose propionate, cellulose butyrate, etc. Dispersion agents such as sulfonated oleic, stearic, or palmitic acids may be used. Compounds contain —O—P(=O)(R)—R′ group wherein R and R′ represent an amino group, an O-alkyl group, an O-aryl group, and O-cycloalkyl group, or an O-aralkyl. Invented by James G. McNally and Joseph B. Dickey, Rochester, N. Y. Assigned to Eastman Kodak Co. Rochester, N. Y. Application April 7, 1939. 4 claims.

2,326,321. METHOD OF PRINTING USING SEVERAL COLORED INKS and applying heat to dry the printed surface between the successive applications of the several inks. The improved method produces an impression of superior clarity and brilliance, eliminating blurring and smudging. The different pigments have varying specific gravity, oil absorption, opacity, etc.; thus different amounts are used for different inks. For example a much larger percentage of yellow pigment is necessary for yellow ink than is required of black for black ink. The several inks are compounded with solvents having evaporation rates varying inversely with the tack of the ink, and inversely with the pigment content. The impressions can all be made to dry and harden simultaneously and rapidly enough to eliminate any difficulty with spreading of dots on the top layer. Petroleum solvents are suggested having boiling ranges varying by at least ten degrees centigrade from each other. Inks are dried at about 250 deg. C. in a fraction of a second. Invented by Floyd E. Barmeier, Chicago, Ill. Assigned to General Printing Ink Corp., New York, N. Y. Application August 1, 1940. 11 claims.

2,326,868. METHOD OF DEHUSKING CAROB BEANS used in the textile industry for sizing and finishing textiles and as a thickener in the printing of textiles. The carob bean is treated with sulphuric or phosphoric acid containing less than 10% and preferably not more than 5% of water to prevent excessive swelling of the gum. The temperature should not be less than 40 deg. C. and should be kept below the point at which attack on the gum occurs and thereby the husk is destroyed without affecting the gum. Invented by Louis A. Lantz and Wadim Roman, Manchester, England. Assigned to The Calico Printers' Association Limited, Manchester, England. Application February 20, 1942. 7 claims.

Printing Presses and Equipment:

2,324,631. PRESSURE CYLINDER FOR A TEXTILE PRINTING MACHINE which applies uniform pressure to the fabric being printed throughout its entire width. Padding of pressure cylinders is obviated. The base cylinder has a rigid convex crowned surface. A vulcanized rubber layer is secured to it which has a cylindrical peripheral surface. Short, reinforcing fibers are contained in the rubber, forming a rough anti-slipping surface, reinforcing the rubber and limiting its flow while permitting its deformation. Invented by John H. May, Cranston, R. I. Assigned to Cranston Print Works Co., Cranston, R. I. Application May 13, 1941. 1 claim.

2,325,578. APPARATUS FOR APPLYING SWATCHES of fabric or other material to catalog or other mounting sheets. The swatches stacked in a supply magazine are separated by paper sheets to facilitate the withdrawal, preferably downward, of one swatch at a time by a movable suction head which grips the rearward half of a swatch and brings it to a mounting station where pressure is applied by a movable presser to bring the projecting portion of the swatch into intimate contact with adhesive on the mounting sheet. The adhesive is conveniently preapplied at an adjacent station during a stop in the progress of the mounting sheets common with that of the mounting station. As the presser engages the swatch the suction head releases it and returns to the supply magazine, and the presser completes application of the swatch. Invented by Philip C. P. Booty, Chicago, Ill. Assigned to Leslie W. Fricke, Chicago, Ill. Application January 25, 1941. 26 claims.

2,326,180. ADJUSTABLE THRUST BEARING adapted for mounting at or near end of a shaft which will facilitate accurate lengthwise adjustment of shaft without interrupting its rotation. Bearings of this type are useful in rotary printing presses for obtaining accurate transverse registry, and especially for correcting improper registry without stopping the press. The bearing construction comprises a rotatable shaft, a thrust ball bearing including spaced rotating races being mounted on the shaft. A spring engages an abutment of shaft and bearing against the non-rotating race of shaft. An adjustable device engages the non-rotating race, and a support shifts the race, with the shaft, against the pressure of the spring. Invented by Laszlo M. Stempel, Coraopolis, Pa. Assigned to The Lithograph Press Mfg. Co., Pittsburgh, Pa. Application March 14, 1942. 10 claims.

2,326,429. IMPROVEMENTS IN SPREADER ROLLS for applying glue, paint, etc., to sheets of veneer, paper, fabric, etc. The doctor roll of a pair of rolls, such as a chromium faced roll, is driven in cooperation with the other roll at a slower speed by a universal-joint connection insuring proper gearing regardless of variations in the diameters of the rolls due to wear. For contact drive the doctor roll may be permitted to run ahead of the gearing. The other roll is rubber-surfaced and is finished with circular or helical grooves to contain the material to be spread, which is forced out by compression on contact with the material being coated. Invented by John E. Black and Robert S. Black, Mendota, Ill. Unassigned. Application May 1, 1941. 21 claims.

2,327,122. SECTIONAL INK-ROLL CONSTRUCTION wherein each section is adjustable to confine the inking to predetermined type or dies or portions of type of set-ups or forms as desired, applicable to a printing press and printing numbers on perforated tickets. A fine degree of adjustment of the roller along the length of the shaft permits printing part of the form without contacting the perforations in the paper and permits compensation for close registry of the numbering machines to print in whatever position is desired within the blank space of the printed coupon. The inking roller includes a shaft having longitudinal keyways or grooves and roller sections with sleeve hubs which have key portions slidable in the keyways on the shaft. The shaft has a spiral series of closely spaced threaded openings throughout its length for reception of threaded stop pins adapted to engage the ends of the sleeves for holding the roller sections in desired positionsof adjustment for inking a printing plate in spots or at spaced points as required. Invented by Joseph Mehlman, Los Angeles, Calif. Unassigned. Application February 12, 1940. 3 claims.

For patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Munsey Bldg., Washington, D. C.

ACCORDING TO WORD RECEIVED from the Lanston Monotype Machine Company, the right of that company to continue to manufacture matrices of all sizes of all the type faces designed by the American Type Founders was confirmed by a decision of the U. S. Circuit Court of Appeals for the Third Circuit dated August 4, 1943. The opinion affirms the judgment of a lower court that a license agreement between the two companies dated December 1, 1925, was a permanent and continuing contract and could be terminated by notice of cancellation by the plaintiff, American Type Founders, Inc.

CRAFTSMEN

(Continued from Page 32)

offset high-etch relief plates are used for printing federal revenue stamps and by some check printers where a close, overall pattern of a bank building is to appear on bank checks. Plates are printed from without using dampening roller mechanism. Up to a million impressions have been secured. The metal for high-etch plates is thicker than for regular offset work. The printing image is etched in relief with bearer metal at the sides to support the inking rollers.

In one of the discussions from the platform, the speaker said that complex and interrelated chemical and physical phenomena are present in press inking, especially in offset printing. More research is needed. Free fatty acids present in the ink seem to cause much of the trouble. He said that ink made without aluminum hydrate will not and cannot be made to strip.

William C. Huebner of Huebner Laboratories, New York, was scheduled to speak at the opening session of the convention. He was indisposed due to straining back muscles, but the paper was presented.

Huebner Forecasts Future Developments

Mr. Huebner discussed certain process and equipment items needed for greater efficiency in the Graphic Arts after the war to enable the industry to keep pace with advances made in other branches of industry. He pointed out the need for a more efficient method to transfer ink from printing surfaces to papers without pressure to permit better printing at high speeds with lighter and simpler presses. He cited the need for a wide range of low-cost papers which need not meet present requirements imposed by specific presses using a given printing process. For brilliant color illustrations, a base white printed under the illustration areas will give newspapers a new appeal. Coarse halftone screens in newspaper printing can be replaced by fine-textured illustrations.

All color separations will be made simultaneously in one exposure on one plate and color matching of values will replace guesswork and reproofs.

He asserted that photo-textype cameras will be used for type composition, the new methods including composition of display type, and the making of authors' corrections and proof changes.

In conclusion, however, Mr. Huebner thinks the application of such new developments will be slow. This will be dependent upon post-war conditions.

After reading the paper, Editor E. F. Trotter of *Printing* discussed briefly Mr. Huebner's idea of printing without pressure (transfer of ink from plate to paper) through employment of electrical forces.

MacD. Sinclair, editor of *Printing Equipment Engineer*, commented upon photo-typesetting, saying that it was difficult to appraise exactly what Mr. Huebner had in mind, because some of the industry's best minds think far ahead. However, Intertype Corporation and George Westover of England, have been granted patents by the United States Patent Office for photo-type-setting machines, which with the exception of the usual casting mechanism, operate upon the principles of their predecessors. In both proposed machines, negative characters are contained in the "matrices" and extremely flexible devices permit true set-width reproduction, differential spacing and exact type size.

Just before the conclusion of the clinic Wm. H. Wood presented a rather inspirational picture of the possibilities of a tremendously increased use of color in post-war printing. In this printing there will be a burst of color. Eastman and Agfa-Ansco have produced and have made readily available color films to amateur photographers. If the amateur photographer can take pictures easily, he is going to demand color in his printing. There will be a desire by people to see natural colors in newspapers, magazines and other media.

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WPB *News and Notes*

Paper Conservation . . .

New Standards and Maximum Weights in Six Classifications of Paper Fixed by Order L-120 Amended

APPLYING only to United States production, the War Production Board issued Standardization and Simplification of Paper and Paperboard Limitation Order L-120 as Amended on August 28. New standards and maximum weights in the manufacture of six categories of writing and printing papers were fixed. Reduction in weights in certain papers actually increases by about 15% the area of paper available for commercial and governmental use, as well as for general public consumption.

While the provisions of L-120 apply directly to the manufacture of paper in the United States, printers are interested in the order from the standpoint of knowing what kinds, sizes and weights of paper will be available to them.

Limitation Order L-120 as amended affects practically all paper used in publications, including newspapers, magazines and books, and all commercial printing papers, as well as writing, tablet and envelope papers, stated Director Arthur G. Wakeman of WPB's Pulp and Paper Division. In effect, the amended order will materially increase the number of sheets available to serve the greatest number of essential users.

The order covers both simplification and standardization of paper. The heavier wrights have been eliminated wherever practical and maximum weights set up. Specifically, weights of uncoated English (machine) finish book paper are fixed at 30, 36, 40 and 45 lbs., (25 in. by 38 in.—500) except that an 85 lb. paper may be used for printing music. Other book papers run up to 50 and 60 lbs., 65 lb. for multicolor offset printing, 70 lb. for cigarette cups and 120 lb. for certain ticket paper.

Fine writing papers are based, in the main, on 500 sheets, 17 in. by 22 in., and provide for grades running from 7 to 36 lbs., except that certain bristols may be made in weights up to 140 lbs. (25½ in. by 30½ in.).

There are several exceptions for special types of papers such as blueprint and cover papers.

Mimeograph paper is limited to a maximum of 16 lb. and 18 lb.

Ten kinds of paper suitable for printing magazines and covers are listed, with weights running from 39 to 70 lb. dependent upon specific uses.

Novel news and newsprint are fixed at a standard of 32 lbs. (24 in. by 36 in.).

OUTLINE OF SIZES AND WEIGHTS

Schedule I—Papers for Use in Commercial Printing.

Uncoated English (Machine) Finish Book Papers—Standard basis weights (per 500 sheets, 25 in. by 38 in.): 30, 35, 40 and 45 lb. and if for use in printing sheet music, basis weight 85 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x44, 35x45, 38x50.

Uncoated Book Papers, Supercalendered—Standard basis weights (per 500 sheets 25 in. by 38 in.): 40, 45, 50 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x44, 35x45, 38x50.

Antique (Eggshell) Finish Book Papers—Standard basis weights (per 500 sheets, 25 in. by 38 in.): 40, 45, 50 lb. If in standard watermarked text grade, basis weight 60 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x44, 35x45, 38x50.

Uncoated Offset Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 50 and 60 lb. and if for use in multi-color printing on an offset press, 65 lb. Standard size in inches: 22½x35, 25x38, 28x42, 28x44, 32x44, 35x45, 38x50, 41x54, 44x64.

Process (Machine) Coated Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 45, 50 and 60 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x44, 35x45, 38x50.

Coated One Side Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 50 and 60 lb. If for use in printing cigarette cups, basis weight 70 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x42, 35x45, 38x50.

Glossy Coated Two Sides Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 60 and 70 lb. Standard size in inches: 25x38, 28x42, 28x44, 32x45, 35x44, 38x50.

Coated Two Sides Offset Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 60 and 70 lb. Standard sizes in inches: 22½x35, 25x38, 28x42, 28x44, 32x44, 35x45, 38x50, 41x54.

Dull Coated Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 60 and 70 lb. Standard sizes in inches: 25x38, 28x42, 28x44, 32x44, 35x45, 38x50.

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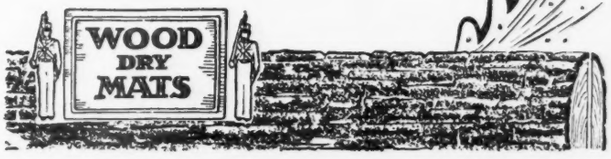

Plain Coated Cover Papers—Standard basis weights (per 500 sheets 20 in. by 26 in.): 50 and 60 lb. Standard sizes in inches: 20x26, 23x35, 26x40, 35x46.

Bogus (Ticket) Bristol—Maximum basis weight permitted: 22½ in. by 28½ in., 120 lb.

Poster Papers—Maximum basis weight permitted: 25 in. by 38 in., 60 lb.

Coated Postcard Bristol—Maximum thickness permitted: 0.011 in.

Groundwood Printing Papers—(All Grades) —Maximum basis weights permitted: Machine finish, 25 in. by 38 in., 45 lb. Antique finish, 25 in. by 38 in., 50 lb. Supercalendered, 25 in. by 38 in., 50 lb.

Novel News—Maximum basis weight permitted, 24 in. by 36 in., 32 lb.

Newsprint—Maximum basis weight permitted, 24 in. by 36 in., 32 lb.

Groundwood Directory Papers—Maximum basis weight permitted, 24 in. by 36 in., 28 lb.

Railroad Manila—Maximum basis weight permitted, 17 in. by 22 in., 16 lb.

Schedule II—Paper for Use in Book Publishing

Uncoated English (Machine) Finish Book Papers—Standard basis weights (per 500 sheets 25 in. by 38 in.): 30, 35, 40, 45 lb. If for use in printing text books for elementary school grades 1 and 2 or for juvenile books, basis weight 50 lb. Standard size in inches: 38x50, 41x61, 44x66, 46x69.

Uncoated Book Papers, Supercalendered—Standard basis weights (per 500 sheets 25 in. by 38 in.): 40, 45 and 50 lb. Standard sizes in inches: 38x50, 41x61, 44x66, 46x69.

Antique (Eggshell) Book Papers—(Including High Bulk)—Standard basis weights (per 500 sheets 25 in. by 38 in.) 40, 45 and 50 lb. If in a standard watermarked text grade, basis weight 60 lb. Standard sizes in inches: 38x50, 41x61, 44x66, 46x69.

Uncoated Offset Book Papers—Standard basis weights (per 500 sheets, 25 in. by 38 in.): 50 and 60 lb. If for use in multicolor printing on an offset press 65 lb. Standard sizes in inches: 38x50, 41x54, 44x64, 50x68¼.

Coated Two Sides Book Papers—(Including glossy coated, dull coated, and coated offset)—Standard basis weights (per 500 sheets 25 in. by 38 in.): 60 and 70 lb. Standard sizes in inches: 38x50, 41x61, 44x66, 46x69.

Process (Machine Coated) Book Papers—Maximum basis weights permitted, 25 in. by 38 in., 60 lb.

Coated One Side Book Papers—Maximum basis weight permitted, 25 in. by 38 in., 60 lb.

Plain Coated Cover—Maximum basis weights permitted, 20 in. by 26 in., 60 lb.

End Leaf Paper—Maximum basis weight permitted, 25 in. by 38 in., 80 lb.

School Drawing Paper—Maximum basis weight permitted, 25 in. by 38 in., 50 lb.

Groundwood Printing Papers—(All grades) —Maximum basis weights permitted:
Machine Finish, 25 in. by 38 in., 45 lb.
Antique Finish, 25 in. by 38 in., 50 lb.
Supercalendered, 25 in. by 38 in., 50 lb.

Novel News—Maximum basis weight permitted, 24 in. by 36 in., 32 lb.

Newsprint—Maximum basis weight permitted, 24 in. by 36 in., 32 lb.

Groundwood Directory Paper—Maximum basis weight permitted, 24 in. by 36 in., 28 lb.

"FLECTO"
GUMMED BACKING FELT

Porosity permits quick escape of steam — glue coat prevents slipping or leaving matrix under heat. Adhesive does not crack, peel, or crystallize. Gauges .021, .025, .030, and .035 in sheets 18" x 24" also gauges .040, .045, .050, and .060 in sheets 18" x 22" — no charge for strip cutting.

COATED ZINC BACKUP BOARD

GAUGES: .015—.032

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And So, the **STEREO FOREMAN** *Told Them*

★ It was an important advertiser who wanted to know just why his halftone renderings suddenly got better . . . The space man did not know, but said he would ask the engraver . . . The engraver did not know but said, Let's ask the pressman." Pressman said all he knew was that the page plates were coming through better . . . So it was the stereo foreman who told them that the change to Certified Mats was working out "just swell."

Certified field men are always available for consultation on mat questions.

CERTIFIED DRY MAT CORPORATION

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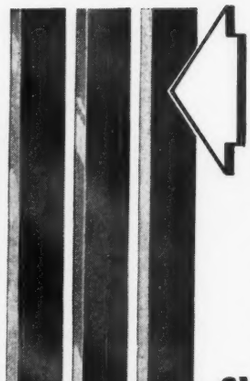

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IN your all-out defense against dust danger and damage, use the TORNADO. Gets dust, dirt and lint *all out* of motors, linotypes, presses, folders. Makes motors and machines last longer. Also convertible for vacuum-cleaning of shelving, paper stock and type cases. Adaptable for spraying paint and insecticide. Keep your costs down — your profits up — by keeping your plant clean with a TORNADO.

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TAKE THE DIRT OUT OF DUST-RY with BREUER'S BALL BEARING TORNADO PORTABLE ELECTRIC BLOWER

BREUER ELECTRIC MFG. CO.

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Schedule III—Fine Writing Papers

Rag Content Bond Papers — Standard weights (per 500 sheets 17 in. by 22 in.): For extra 100%, 100% and 75% rag content: substance weights 11, 13, 16, 20; for all other grades, substance weights 11, 13, 16; and, if for use in manufacturing envelopes, substance weight 20; or, if for use as a protective paper or for checks, substance weights 20 and 24 for all grades. Standard sizes in inches: For white and ivory, 17x22, 17x28, 19x24, 22x34, 24x38, 28x34, 34x44. For other colors, 17x22, 17x28, 19x24, 22x34, 24x38, 28x34.

Rag Content Ledger Papers—Standard weights (per 500 sheets 17 in. by 22 in.): for extra 100% and 100% rag content: Substance weights 24, 28, 32 and 36 lb.; for all other grades, substance weights 24 and 28 lb. Standard sizes in inches—White and colors, 17x22, 17x28, 19x24, 22½x22½, 22x34, 24x38, 28x34.

Rag Content Loose Leaf Ledger Papers—(Including Machine Posting Ledger Papers)—Standard weights (per 500 sheets 17 in. by 22 in.): For extra 100% and 100% rag content: Substance weights 24, 28, 32 and 36 lb.; for all other grades: Substance weights 24 and 28 lb. Standard sizes in inches—White and colors, 17½x22½, 19½x24½, 22½x22½, 22½x28½, 22½x35, 24½x24½, 24½x28½, 24½x39.

Rag Content Writing Papers—(Including Linens)—Standard weights (per 500 sheets 17 in. by 22 in.): for 100% rag content: substance weights 16 and 20; for other grades: substance weight 16; and, if for use in manufacturing envelopes, substance weight 20; or, if for use as a protective paper or for checks, substance weights 20 and 24 for all grades. Standard sizes in inches: White and colors, 17x22, 17x28, 19x24, 22x34.

Rag Content Onion Skin Papers—(Including Manifold Papers)—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 7 to 9 inclusive. Standard sizes in inches: For white, 21x32, 22x34, 24x38, 26x34, 28x34. For colors, 22x34, 24x38, 28x34.

Rag Content Wedding Papers—(Including Wedding Bristols)—Standard weights (per 500 sheets): Substance weights (17 in. by 22 in.) 20, 24 and 28; substance weights (22½ in. by 28½ in.), 100 and 120. Standard sizes in inches: For white, sheets 22x34, 22½x28½. For ivory, sheets 22x34.

Rag Content Index—Standard weights (per 500 sheets 25½ in. by 30½ in.): substance weights 90, 110 and 140. Standard sizes in inches: white and colors, sheets: 20½ x 24¾, 25½ x 30½.

Base Stock for Blueprint and Direct Line Papers—Standard weights (per 500 sheets 17 in. by 22 in.): 100 percent rag content; substance weights 17, 20½ and 24; for all other grades; substance weights 17 and 20½. Standard sizes: Rolls only: 24, 30, 36, 42, 48 and 54 in. wide.

Base Stock for Negative Papers—Standard weights (per 500 sheets 17 in. by 22 in.); Substance weight 14. Standard sizes: Rolls only: 24, 30, 36, 42, 48 and 54 in. wide.

Rag Content Antique (Machine Finish) Cover Papers (Excluding Manuscript Covers)—Standard weights: (per 500 sheets 20 in. by 26 in.) Substance weights 40, 50, 65. Standard sizes in inches: White and colors. Sheets: 20x26, 23x35, 26x40.

Chemical Wood Pulp Antique (Machine Finish) Cover Papers—Standard weights (per 500 sheets 20 in. by 26 in.) Chemical Wood Pulp: Substance weights 40, 50, 65. Ground Wood Content: Substance weights 40, 50, 65. Chemical Wood Pulp: Substance weights 50, 65, 80 and 130, and weights made by pasting any of these substances. Ground wood content: substance weights 40, 50, 65, 80 and 130, and weights made by passing any of these substances. Standard sizes in inches. White and colors. Sheets: 20x26, 23x35, 26x40.

Specialty Cover Papers (Fancy Coated, Embossed or Decorative Specialty Covers, and including "S. and S. C. Cover"). Standard weights: With respect to each manufacturer and each standard grade under A (1), any weight, not exceeding 25 in. by 38 in.—70 for "S. and S. C. Cover" or 20 in. by 26 in.—65 for other grades, regularly stocked as of December 1, 1941.

Chemical Wood Pulp Bond Papers—Standard weights: (per 500 sheets 17 in. by 22 in.): Substance weights 13, 16; and, if for use in manufacturing envelopes, substance weight 20; or if for use as a protective paper or for checks, or for use on an addressing machine, substance weights 20 and 24. Standard sizes in inches: For White and Ivory, Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34, 34x44. For other colors, Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34.

Chemical Wood Pulp Ledger Papers—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 24, 28. Standard sizes in inches: White and colors, Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34, 22½x22½, 22½x34½, 24½x24½, 24½x39.

Chemical Wood Pulp Writing Papers—(Wove or Laid)—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 14, 16; and, if to fill an order for the Federal Government substance weight 18; or if for use in manufacturing envelopes, substance weight 20; or if for use as a protective paper or for checks, substance weights 20 and 24. Standard sizes (in inches): Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34.

Register, Continuous Form, and Sales Book Chemical Wood Pulp Bond Papers—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 10, 12, 15. Standard sizes: Any size, sheet or roll, if manufactured in a quantity of at least 5,000 pounds of a sheet item or 2000 pounds of a roll item.

Chemical Wood Pulp Manifold Papers (Including Onion Skin Papers)—Standard weight (per 500 sheets 17 in. by 22 in.): Substance weights 7 to 9 inclusive. Standard sizes in inches: White Sheets: 21x32, 22x34, 24x38, 26x34, 28x34. Colors—Sheets: 22x34, 24x38, 28x34.

Chemical Wood Pulp Mimeograph Papers (Including Rag Content Mimeograph)—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 16 and 18. Standard sizes in inches: White and color—Sheets: 17x22, 17x28, 22x34, 28x34. A Special Grade may be manufactured in white or in any color or size to fill a special making order for the United States Government provided the substance weight is standard.

Gelatin and Spirit Processes—Chemical and Wood Pulp Duplicating Papers—Standard weight (per 500 sheets 17 in. by 22 in.): For White: Substance weights 13, 16 and 20. For colors: Substance weights 16 and 20. Standard sizes in inches: White and colors: Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34.

Chemical Wood Pulp Opaque Circular Papers—Standard weight (per 500 sheets 17 in. by 22 in.): Substance weights 13, 16. Standard sizes in inches—Sheets: 17x22, 17x28, 22x34, 25x38, 28x34, 35x45, 38x50.

Chemical Wood Pulp Vellum and Wedding Papers—Standard weights (per 500 sheets in the size indicated): White: 22 in. by 34 in.—40 48, 56; White: 35 in. by 45 in.—84, 101 and 118; White: 22½ in. by 28½ in.—100, 120. Ivory and Granite: 22 in. by 34 in.—40, 48, 56; Ivory and Granite: 35 in. by 45 in.—118. Other colors: 22 in. by 34 in.—40, 48 and 56. Other colors: 35 in. by 45 in.—118. Standard sizes in inches for the weights indicated above—White: Sheets 22x34, 35x45, 22½x28½. White: Sheets 22x34, 35x45, 22½x28½. Colors: Sheets: 22x34, 35x45.

Converting Grades of Chemical Wood Pulp Papeterie Papers—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights: 16, 20, 24. Standard sizes: Any size, sheet or roll, if manufactured in a quantity of at least 5000 pounds of a sheet item or 2000 pounds of a roll item.

Chemical Wood Pulp Index Bristols—Standard weights (per 500 sheets 25½ in. by 30½ in.): Substance weights 90, 110, 140. Substance weights 90, 110, 140 and 170. Standard sizes in inches—White and colors, sheets: 20½x24¾, 22½x28½, 25½x30½.

Chemical Wood Pulp Printing Bristols—Standard weights (per 500 sheets 22½ in. by 28½ in.): Substance weights 90, 100, 120. Standard sizes in inches: White and colors, Sheets: 22½x28½.

Ground Wood Content Bond Papers (Including Writing Papers)—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 13 and 16; and, if to fill an order for the Federal Government, substance weight 18. Standard sizes in inches: Sheets: 17x22, 17x28, 19x24, 22x34, 24x38, 28x34.

Ground Wood Content Mimeograph Papers—Standard weights (per 500 sheets 17 in. by 22 in.): Substance weights 16 and 18. Standard sizes in inches: Sheets: 17x22, 17x28, 22x34,28x34.

Text Papers (Specialty, Deckle Edge, Fancy or Water Marked)—Maximum substance weight permitted: 25 in. by 38 in.—60.

Uncoated Postcard Bristol—Maximum substance weight permitted: 22½ in. by 28½ in.—94

Manuscript Cover—Maximum substance weight permitted: 18 in. by 31 in.—40.

Schedule IV—Tablet Paper

Tablet Papers (Including all grades regardless of finish)—Standard weights (per 500 sheets): For Pencil Tablet, 24 in. by 36 in.—32 lb. For Other Grades, 17 in. by 22 in.—16 lb. Standard sizes: Any sheet size or roll width, if manufactured at one time in a quantity of at least 5000 pounds of a sheet item or at least 2000 pounds of a roll item.

Schedule V—Envelope Papers

Commercial Wood Envelope Papers—(Book Grades)—Standard basis weights (per 500 sheets 17 in. by 22 in.): 16, 20, 24. Standard sizes: Any sheet size or roll width, if manufactured at one time in a quantity of (a) at least 5000 pounds of an item in white; or (b) at least 2000 pounds of an item in a color.

Schedule XIV—Paper For Use in Newspapers or Magazines

Standardization and simplification of "Paper for Use in Newspapers or Magazines"—The following maximum weight limitations do not prevent the manufacture of basis weights lower than the maximum specified.

HIGH SPEED and SAFETY with the No. 3-A C&G SAW TRIMMER

A handful of slugs or a single nine point type will "STAY PUT" when locked in the C&G positive Work Holder. No close holding or finger risk is required to keep the material in place when it goes through the saw.

The C&G No. 3-A Saw Trimmer is designed to give maximum accuracy with maximum safety.

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Supercalendered Rotogravure — Maximum basis weight permitted: 25 in. by 38 in.—39 lb.

Uncoated English (Machine) Finish Book Papers—Maximum basis weight permitted: 25 in. by 38 in.—45 lb.

Uncoated Book Papers, supercalendered—Maximum basis weight permitted: 25 in. by 38 in.—50 lb. Antique (eggshell) finish book papers—Maximum basis weight permitted 25 in. by 38 in.—50 lb.

Uncoated Offset Book Papers—Maximum basis weight permitted: 25 in. by 38 in.—60 lb., and if for use in multicolor printing on an offset press, 65 lb.

Process (Machine) Coated Book Paper—Maximum weights permitted: Inside: 25 in. by 38 in.—60 lb. Cover: 25 in. by 38 in.—70 lb.

Coated Two Sides Book Papers—(Glossy coated, dull coated and coated offset)—Maximum basis weight permitted: 25 in. by 38 in.—70 lb.

Coated One Side Book Papers—Maximum basis weight permitted: 25 in. by 38 in.—60 lb.

Plain Coated Cover Papers—Maximum basis weight permitted, 20 in. by 26 in.—60 lb.

Uncoated Cover Papers—(all grades)—Maximum basis weights permitted: 25 in. by 38 in.—70 lb.

Groundwood Printing Papers (all grades)—Maximum basis weights permitted: For machine finish: 25 in. by 38 in.—45 lb. For antique finish: 25 in. by 38 in.—50 lb. For supercalendered: 25 in. by 38 in.—50 lb.

Novel News—Maximum basis weight permitted: 24 in. by 36 in.—32 lb.

Newsprint—Maximum basis weight permitted: 24 in. by 36 in.—32 lb.

Scrap Need Increases

THE continued need for industrial scrap which goes into the making of armament for the Army, Navy or the Marines should not be underestimated. Thousands of printing pressmen alone would have gone into battle only partially armed if it had not been for the immeasurable tons of machinery sent to the national scrap pile by all of American industry.

The Miller Printing Machinery Co. reports that in 1942, through the Miller Wartime Scrap Allowance Plan, printing concerns scrapped enough obsolete printing presses to supply the scrap to build two large destroyers. By adding the thousands of tons of metals channelled into the national scrap pile from the printing industry it will be seen that the metal contributed is beyond measure. When it is considered that approximately one ton of scrap metal must be combined with one ton of virgin metal to make two tons of ferrous metal suitable for armament manufacture, it is no exaggeration to say that those who have released scrap metal from printing plants, have rendered invaluable service in providing material essential to the arming of our fighting forces.

The unfounded assumption that the continued need for this scrap metal has subsided, is refuted by P. C. Cabot, Director of Salvage Division, who has stated that the iron and steel scrap quota for the second half of 1943 will be 15,000,000 net tons, or 2,000,000 tons more than the 13,000,000 tons required during the first half of the year.

Thus it will be seen that more ferrous metal scrap is needed now than ever before. Of four different materials listed by WPB as critically vital this year, heavy melting and cast iron and steel scrap such as are found in obsolete printing machinery are important.

Those who have already scrapped printing machinery as well as those who are about to do so, may take consolation in the added thought that this scrap metal is clearing the industry of obsolete machinery which otherwise might be used later to menace the standards of the industry.

Elevator Maintenance Parts

ON July 29, the War Production Board issued Interpretation No. 1 to General Conservation Order L-89 as Amended June 9. The interpretation was issued because a number of questions regarding replacement of elevator parts have arisen.

The order exempts from the necessity for authorization on Form PD-411 (now WPB 1236) purchase orders for maintenance parts up to $25 per elevator and not to exceed $50 worth of such parts per elevator in any one year. The Interpretation states that these dollar value limitations refer to the retail sales price of the parts exclusive of the cost of labor or other services required for installation. The exemption covers small maintenance or replacement parts (within the dollar value limits) necessary to keep the elevator in sound working condition even though there is some change in type. For example, a worn out gate switch of a type no longer manufactured may be replaced with a gate switch of a different type.

Repair parts, irrespective of value, are exempted from authorization requirements by L-89 only when there has been an actual breakdown or suspension of operations of the elevator. The Interpretation makes clear the suspension of operations may be considered to have occurred when (1) the condition of the cables or other parts would make continued operation of the elevator without repair definitely dangerous; and (2) the cables or other parts have been condemned under a state law or municipal ordnance requiring suspension of operations unless replacement is made within the period specified on the inspector's report (normally 30 to 90 days).

A possible future breakdown, however, is not interpreted as a "suspension of operations," and the exemption does not apply to parts to be used for a change in existing method of operation or for additions to existing elevators to comply with "Code Requirements."

May Replace Damaged or Inventory Paper

NEWSPAPER publishers were advised on August 25, that they may replace damaged or destroyed inventory paper without violating the War Production Board newsprint Limitation Order L-240. Interpretation No. 3 of this order points out that when inventory paper including print paper on hand, available for use, and in transit, is destroyed or damaged so that it becomes unusable, the publisher may accept additional paper to replace it. This holds whether the paper was actually delivered to the publisher or was in transit when destroyed or damaged. The acceptance of additional paper by a publisher under these circumstances will not constitute a violation of paragraph (d) (2) which limits inventories, the interpretation points out.

Industrial Wiping Cloth Order L-312

PROCESSORS of industrial wiping cloths are to set aside 25% of their entire poundage production for military use, as the result of Industrial Wiping Cloth Order L-312 issued July 28 by the War Production Board. This percentage is to be delivered or set aside for delivery upon receipt of direct military orders, unless WPB releases such stock or otherwise allocates it. "Industrial wiping cloth" means any used cloth which has been reclaimed for industrial wiping and cleaning. "Colored wiping cloth" means

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Flat Bed • Stereo Machinery

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BUY NEW "BULLDOG" CLAMPS
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100% AUTOMATIC SLUG SAWING
Odd-measure slugs sawed to any measure as ejected from line-casting machine. Fast — accurate — economical. Write for folder and prices.
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128 N. Union St. Chicago
MOHR SAW

those grades of industrial wiping cloths commonly known in the trade as "washed colored wipers," grades No. 1 and No. 2, and No. 3 washed colored wipers, colored heavy or light mattress ticking, colored bathrobe wipers, colored blanket wipers, colored knitted wipers or colored scrim or lace curtain wipers.

"Industrial wiping cloth processors" means any person who during any calendar month launders more than 12,000 lbs. of reclaimed cloths for the purpose of selling them to any person for use as industrial wiping cloths.

"Print Paper" Defined

"PRINT paper" as employed in War Production Board Limitation Order L-240, covering print paper for newspapers, has been defined to include paper reclaimed wholly or partly from white or printed waste, as well as new paper made from virgin fibers.

This clarification of the definition is contained in Interpretation No. 1 of Limitation Order L-240, controlling delivery and use of print paper for newspapers, made public July 24 by WPB.

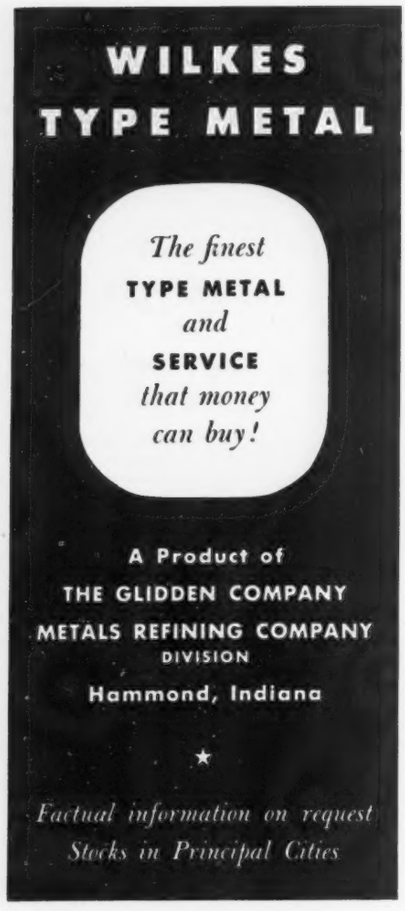
Reclaimed waste paper is not considered as ex-quota on the production level, as such paper may not be added to the tonnage which may be produced under Canadian and United States orders limiting mill operations. Consequently, it cannot be considered as ex-quota on the consumption level. It must be included, together with new paper, in computing a publisher's permitted usage under the order.

A contrary ruling, H. M. Bitner, Director of the Printing & Publishing Division of WPB declared, would give an unfair advantage to newspaper publishers owning paper mills. Furthermore, it was pointed out by A. G. Wakeman, Director of the Pulp & Paper Division, that waste paper is used exclusively in making paperboard, the supply of which is at least as critical as newsprint. Therefore, the reuse of newsprint waste by newspaper publishers on an ex-quota basis would reduce the available amount of other important products.

If a mill added waste paper to virgin fibre in making paper, the cost per ton of the resultant mixture would be higher than the cost of the same amount of paper made solely from virgin pulp, Mr. Bitner pointed out. In view of the OPA price ceiling, such an operation would be uneconomical for any except a captive mill —that is, one owned and operated by a publisher.

Production Quotas Lifted

PRODUCTION quota restrictions on paper and paperboard imposed by General Conservation Order M-241 were lifted on August 4, the War Production Board's Pulp and Paper Division announced. These restrictions were no longer necessary in view of the changes which have been made in the allocation of woodpulp under amended Order



M-93, it was pointed out. In the new program each producer will be encouraged to manufacture as much paper as he can from the woodpulp which is allocated to him, using substitute fibre wherever possible and every other device to increase production.

High Flash Naptha Under Allocation Control

ON July 28, the War Production Board placed high flash naptha under allocation control because of a sharply increased demand. Allocation was effected under an amendment to Petroleum Solvent Order M-150. The amendment also increased the small order exemption for petroleum solvents, with the exception of high flash naptha, from 60 gal. to 550 gal. This is expected to eliminate more than half of the present applications for allocations which relate to only a little more than 3% of the supply.

Fractional h.p. Motor Repairs

ACCORDING to Interpretation No. 3 of General Limitation Order L-123, effective July 14, the sale of a fractional horsepower motor to replace one broken down is now considered a maintenance and repair transaction, when the broken-down one is taken in by the repairer.

Type Metal Salvage

Of interest to printers is the campaign to salvage old, outmoded type. Old type faces which have not been working for him should be put to work for his country. As one printer expressed it: "Cases full of types which had become sort of hangers-on meant just so much floor space wasted."

Which type faces should be discarded presents a different problem to different printers. Most printers find many faces used only occasionally that have been long discontinued by the manufacturer; sorts are therefore out of the question or obtainable only at premium prices. Many printers have found hundreds of pounds of types they haven't used for years. One printer threw out 2000 pounds, and said he considered this kind of type checkup just the same as a "retooling job" in a machine shop.

American Type Founders through any of its branch offices is offering to survey composing rooms with respect to type which is ready for the hell-box.

Second-hand Machinery

Relates a recent United Typothetae *News Letter:* "OPA finds MPR-136 is impractical in a number of particulars and has issued an amendment, effective July 29. As now amended, the 'new base price' for machines sold on a delivered basis only will be the maximum price of a new equivalent delivered to the point where the second-hand machinery is located at the time of purchase by the seller. It also makes the seller absorb the broker's or finder's fee within the ceiling set on the machinery. Trucks and autos are included in this MPR."

Ultra High-Speed Service

Henry D. McLarty, of McLarty Business Films, 986 Ellicott St., Buffalo 8, New York, has announced the availability of ultra high speed motion picture equipment which is capable of taking movies at the rate of 3000 pictures per second. The service is offered to physicists, engineers, research directors of companies. Further information may be obtained from Mr. McLarty direct at the address given above.

Can't Meet Book Demand

According to a recent United Typothetae of America News Letter, an unprecedented demand for books of all kinds is forcing book publishers to ration books to distributors. The boom is due to several reasons: The war, more time to read, more money to buy books, more sales outlets where books can be purchased, inexpensive reprints of previously published books, etc. Paper rationing, printing and binding difficulties, and transportation problems are said to be the principal bottlenecks which are keeping the book publishing industry from taking the fullest possible advantage of present demand.

Advertisers Alphabetical Index
September 1943

American Publishers Supply . . . 43
American Type Founders 2-31
Atlantic Zinc Works 33
Booth, The E. A. Rubber Co . . 35
Breuer Electric Mfg. Co 40
Burgess Cellulose Co 38
Certified Dry Mat Corp 40
Challenge Machinery Co., The 41
Cline Electric Mfg. Co 43
Cushman Electric Co 41
Duplex Printing Press Co., The 42
Eastern Newspaper Supply 39
Goodyear Tire N Rubber Co . . . 3
Harris-Seybold-Potter Co . . . . . Inside Front Cover
Imperial Type Metal Co 37
Intertype Corporation . . . . . Outside Back Cover
Kelly, E. J., Co 43
Kimble Electric Co 39
Lanston Monotype Machine Co 7
Levey, Frederick H. Co., Inc . . 8
Linotype Parts Co 35
Ludlow Typograph Co 1
Mergenthaler Linotype Co 27
Metals Refining Co 44
Milwaukee Saw Trimmer Corp. 41
Miller Printing Machinery Co. 43
Mohr Lino-Saw Co 43
Morley Co., The 37
Richards, J. A., Co 43
Rouse, H. B. & Co 43
Simonds Worden White Co 40
SKF Industries, Inc 29
Timken Roller Bearing Co., The 6
Tingue, Brown and Co 42
U. S. Treasury Dept . . . . . Inside Back Cover
Vandercook & Sons 43
Wood Flong Corp 39
Wood Newspaper Machinery Corp 4

Your Bond Selling Responsibilities Double!

Starting September 9th, your Government will conduct the greatest drive for dollars from individuals in the history of the world—the 3rd War Loan.

This money, to finance the invasion phase of the war, must come in large part from individuals on payrolls.

Right here's where YOUR bond selling responsibilities DOUBLE!

For this extra money must be raised *in addition* to keeping the already established Pay Roll Allotment Plan steadily climbing. At the same time, every individual on Pay Roll Allotment must be urged to dig deep into his pocket to buy *extra* bonds, in order to play his full part in the 3rd War Loan.

Your now *doubled duties* call for these two steps:

1. If you are in charge of your Pay Roll Plan, check up on it at once—or see that whoever is in charge, does so. See that it is hitting on all cylinders—*and keep it climbing!* Sharply increased Pay Roll percentages are the best warranty of sufficient post war purchasing power to keep the nation's plants (*and yours*) busy.

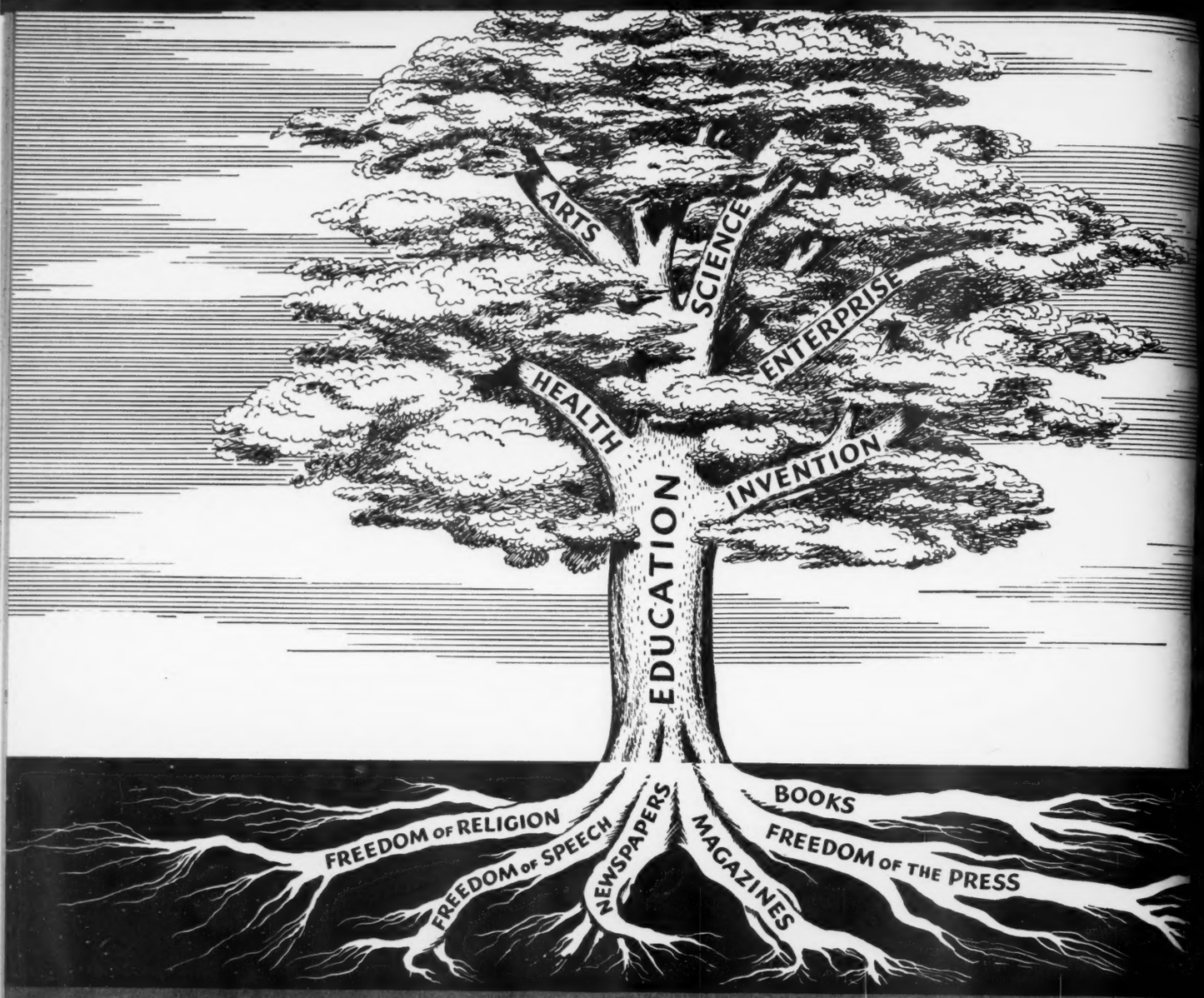
2. In the 3rd War Loan, every individual on the Pay Roll Plan will be asked to put an *extra two weeks salary* into War Bonds—over and above his regular allotment. Appoint yourself as one of the salesmen—and see that this sales force has every opportunity to do a real selling job. The sale of these *extra* bonds cuts the inflationary gap and builds added post-war purchasing power.

Financing this war is a tremendous task—but 130,000,000 Americans are going to see it through 100%! This is their own best *individual* opportunity to share in winning the war. The more frequently and more intelligently this sales story is told, the better the average citizen can be made to understand the wisdom of turning every available loose dollar into the finest and safest investment in the world—United States War Bonds.

★ ★ ★

BACK THE ATTACK With War Bonds!

This space is a contribution to victory today and sound business tomorrow by Printing Equipment Engineer



ROOTS OF THE REPUBLIC

ONE HUNDRED AND SIXTY-SEVEN years ago earnest seekers for the right planted here the seed of a new kind of nation. A nation in which government is by the people themselves. It was the devout conviction of these earnest men that beings cast in His image are endowed with certain inalienable rights. And that the group judgment of His creatures is more adequate for wise government than are the minds of any individuals among them. The sustaining roots of this tree are Freedom of Speech, of Religion, and the Press. From the time the first slender stem emerged upward, until now that a great tree reaches its branches in majesty toward the sky, these freedoms have fed the growing nation with nourishing education. Enlightenment has produced flourishing branches...invention, progress in the sciences, the arts, and in public health. With these have come rising standards of living, and expanding opportunities for all. Great trees grow only slowly. There are no short cuts. While these freedoms continue their process of making available knowledge and understanding for all, the tree that is this nation will in each generation reach ever higher toward the heavens above.

TEXT IN BOOKFACE

INTERTYPE

Fifteenth of a series of messages on the Freedom of the Press by INTERTYPE, *Brooklyn*